

# MOTOR AGE

Vol. IV. No. 9

AUGUST 27, 1903

Ten Cents

## Highest-Class Automobiles

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PANHARD TOURING CAR  
WITH LATEST TYPE ALUMINUM BODY  
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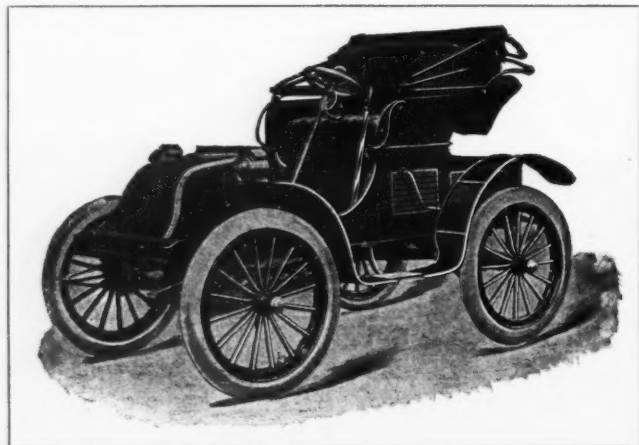
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AND EXAMINE THE

# New Steering Mechanism

Which is one of the New Features  
of this well liked Car.



The Haynes-Apperson Carriage has the  
largest list of first-class road records  
of any carriage in the United States.

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## The Haynes-Apperson Co.

Members of the Association of Licensed Automobile Manufacturers

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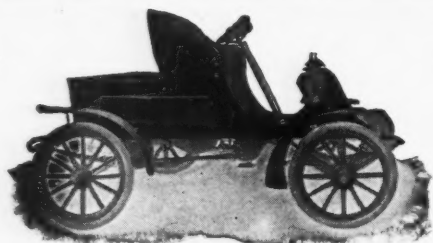
Washington, Ind., May 18th, 1903.

Gentlemen:—Now what do you think of us? We arrived home last Sunday about 7 o'clock without a bit of trouble, just four days' run. Did not have even a puncture or any trouble whatever. Came over 500 miles on all kinds of roads, got in mud up to the hubs at Terre Haute and Bellefontaine, but the machine went through like a bird, and it is putting it mildly when I say that I am delighted with the Elmore. :: Hoping I may get some of my friends interested enough to do you some good, I am,

Yours respectfully,

FRED. S. CLAPP.

YOU NEED IT IN YOUR BUSINESS



## The Elmore Automobile

is the most simple, practical and reliable car ever put on the market. It is propelled by the famous Elmore motor, whose two cylinders have fewer parts than a single cylinder of any other type.

Either engine will propel carriage should the other be cut out. (A very important fact.)

Has dynamo and storage battery. Motor will start and carriage will run on either. (Another important fact.)

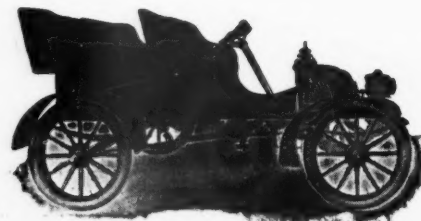
You can charge the battery from the dynamo while running the carriage, which is another important fact.

Has had a practical test of over three years' manufacture.

Two first-class certificates in New York-Boston Endurance Run. Have been used in 1000-mile tours without trouble. And still more important facts.

Doctors' and Business Men's favorite car, Model 7, . . . . \$800

Tonneau Touring Car, Model 8, . . . . \$1400



LOOK UP! WRITE! INVESTIGATE!

## ELMORE MANUFACTURING COMPANY

Member of Association of Licensed  
Automobile Manufacturers.....

Clyde, Ohio



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\$2.00 Per Year

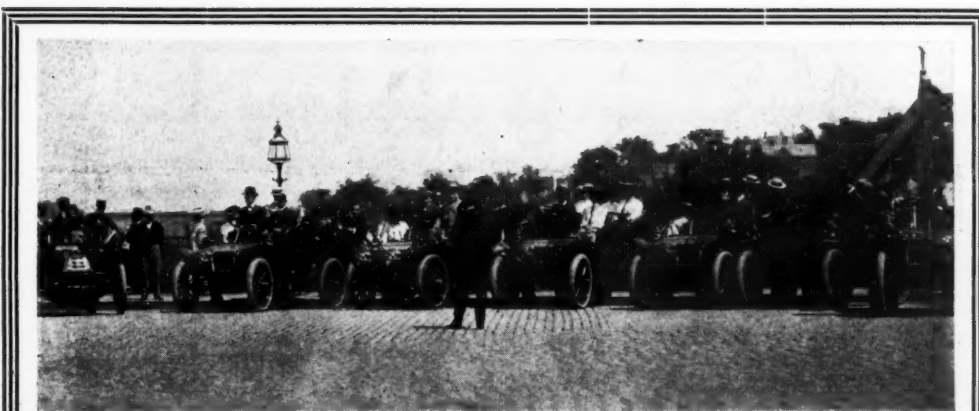
## MANHATTAN WELCOMES THE TRANSCONTINENTAL TOURISTS

New York, Aug. 21  
—Tom Fetch, Marius C. Krarup and Old Pacific made a triumphant entry into town tonight escorted by a notable caravan of automobilists. The doughty Packard had borne the intrepid transcontinental tourists over 5,600 miles of highway and roads that were no roads, through desert sands and over many a mountain's rocks in 61 days of patient plugging and plucky pushing from ocean to ocean. The wheels that had been dipped in the brine of the Pacific at the Cliff House, San Francisco, on the morning of June 20, ceased their revolutions in the hospitable garage of the Packard Motor Car Co. on Fifty-ninth street, long after nightfall this evening, their long journey over, with a transcontinental record to their credit.

Old Pacific had only the thick dust and coated mud of travel to point to as the ear-marks of an achievement that will make its name famous in automobiling annals. Whatever wounds it had received on its long tour had been easily bound up and healed en route and there were no breaks or patches due to conflict with river, plain and mountain visible even to the eyes of a close observer.

MOTOR AGE has followed its course from Pacific to Atlantic week by week and left little to record beyond the welcome at the end and the final record of the achievement.

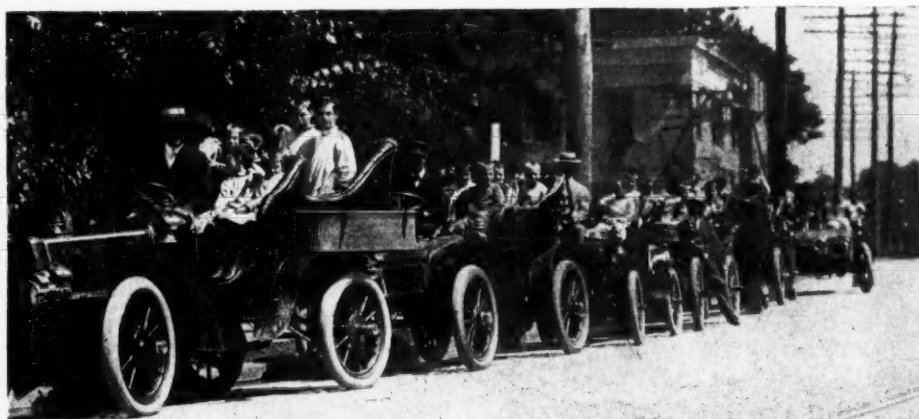
The escort went through Central park to Central bridge, where a picture was taken while waiting



A Portion of the Metropolitan Reception Party



Old Pacific Leads Way Through Central Park



MOTOR AGE

Giving the Children a Ride

for the draw to close. Colonel Pardee had expected to meet the tourists the other side of the bridge and here the crowd waited some time, but subsequently decided to go on to Yonkers.

The American Female Guardian Society is located in the neighborhood and about fifty of the children were playing on the lawns of the bridge park. Somebody suggested giving the

youngsters a ride and in about 2 seconds they were swarming over the various machines shrieking with joy, while about a dozen of their companions looked on enviously from the top balcony of the institution, where the inmates are kept in quarantine during the first 2 weeks of their arrival. George Adams will particularly live in the memory of the children, as he took as many of them as could pile into his Toledo and carried them all around the neighborhood for some time, while the young ones in their ecstasy regaled him with the Star Spangled Banner and other well known popular patriotic melodies.

Before proceeding on to Yonkers, where it was finally decided to meet Old Pacific, a sojourn was made to a near-by road house, and Colonel Pardee called upon for a speech. Mounted on a circular table he told his hearers how glad he was to see them and spoke of the effect on the automobile industry the successful termination of Fetch's trip would have.

Yonkers was reached about 2 o'clock and the party sat down to dinner. Between





courses several more or less promising librettists in the party composed and sang a parody on the popular "Hiawatha." The theme was that of welcome to the tourists, the treatment of it cordial in the extreme, the rendition hilarious and the feet resplendent with bunions.

After dinner Colonel Pardee received word that Fetch and Krarup had left Peekskill and the party decided that instead of waiting in Yonkers it would go up the road. Two miles beyond Tarrytown, at the entrance to Phillipse manor and at the foot of a long hill, several of the machines were stationed. Shortly after 6 o'clock the small boys on bicycles came rushing down the hill, followed by Old Pacific.

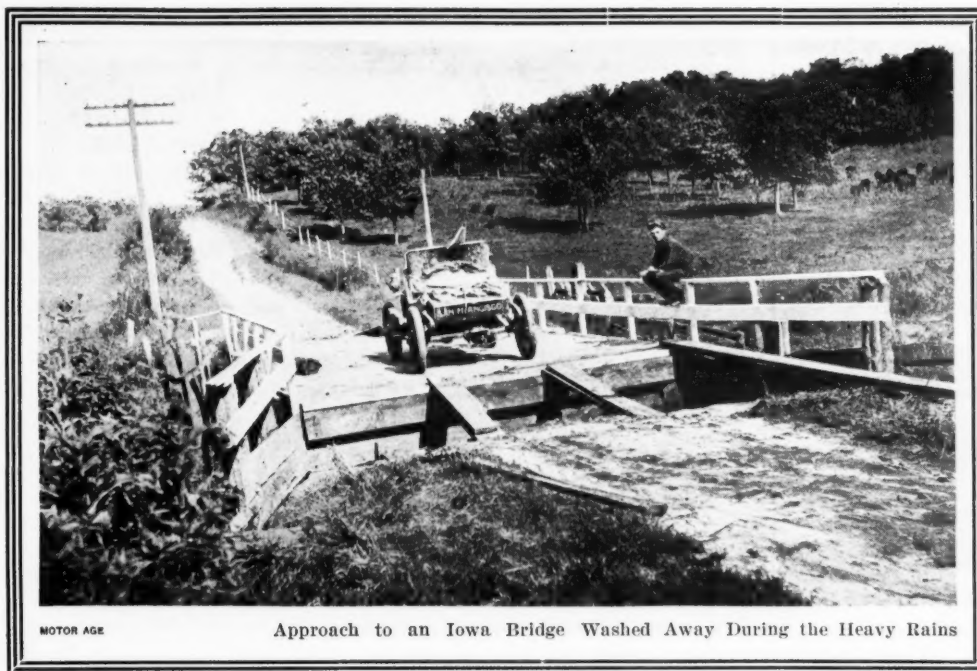
With welcoming yells the party rushed out to meet the travelers who were overwhelmed with congratulations. Their hands were almost shaken off and then no time was lost in getting back to the city. Old Pacific was given the lead and at Tarrytown the rest of the party was met and the final run home begun. All the towns along the Hudson have the 8-mile-an-hour signs conspicuously displayed, but the pace cut out by the machine which had covered 6,000 miles in 2 months kept the rest of the party hustling. This fact was generally commented on.

In passing through the towns the people on the sidewalks would look on in wonder at the procession and when they saw the words "San Francisco" at the back of the mud-stained Packard in the lead the significance of the unusual sight would strike them and the rest of the party would pass through waving hats and hearty yells.

The entry into New York city was a veritable triumphal procession. It was dark then, and the brilliant lamps on the machines, with the occupants singing the parody on Hiawatha, created something of a sensation in Harlem.

At the Packard headquarters on West Fifty-ninth street, the tourists were surrounded by newspaper men, automobilists and tradesmen, where until a late hour they were kept busy answering questions.

A notable feature of the final welcome was



Approach to an Iowa Bridge Washed Away During the Heavy Rains

the praiseworthy absence of trade jealousy in the face of an achievement that did such great credit to American builders and American drivers. The local representatives of makers and the dealers joined heartily with proud Colonel Pardee in the hurrah of reception. It was a tribute to the popular old colonel as well as to the car and the tourists. Among the tradesmen in the welcoming cara-

of which to be proud. The total tire cost for the trip was \$55, making the cost of the tires 1.57 cents per mile for the tires destroyed and for repairs which have been or can be made.

#### IN NORTHERN WISCONSIN WOODS

Chicago, Aug. 24—Four Chicago men, F. W. Hedgeland, Fred H. Wolf, S. H. Lamp and Dr. H. E. Sauer, with a Hoffman car, drove from Chicago to Trout Lake, Wis., this month. The distance is 540 miles and the actual running time was 48 hours.

This car was the first of any kind to run north of New London, Wis., which is 200 miles south of Trout Lake. A good many trials and tribulations were undergone on account of the "awful fierceness of the roads," as Mr. Lamp mildly expresses it, and three of the springs were broken before the destination was reached. The breakages occurred while running through 12 miles of water and swamp land. The machinery, otherwise, went through all right.

The party enjoyed good roads and good weather until it reached Eland Junction, but from that place on the roads were bad. From Antigo to Rhinelander the passage was made under continuously adverse conditions. Near Summit Lake the car passed through a swamp where the water completely covered the working parts. The men were obliged to wade through the morass and push the car ahead of them. After enjoying this experience, they found a road of sand, which furnished variety and fuel for more unkempt language.



Typical of Wisconsin

van were: Thomas B. Jeffery; O. J. Woodard and W. J. Bradley, of the Diamond Rubber Co.; C. A. Duerr, H. A. Weaver and Mr. Atwood, of C. A. Duerr & Co.; the Messrs. Linn, of Babcock & Linn; George B. Adams, of the Toledo gasoline department of the Pope Motor Car Co.; C. H. Gillette, of the Automobile Blue Book; Mr. Winslow, of the Cadillac Co.; Gaston Plaintiff, of John Wanamaker; Herbert Strong, of J. N. Quinby & Co.; J. R. Chisholm, of the Standard Automobile Co.; E. T. Birdsall, of the Vehicle Equipment Co.; James and MacNaughton, of the German-American Automobile Co.

The daily press was represented in part by Gerrie, of the Herald, and Dudley, of the Times, and trade journalism by Morgan, of the Automobile Magazine; Messrs. Swetland, Partridge and Bramwell, of the Automobile, and Smith, of MOTOR AGE. The Mail and Express, Commercial Advertiser and other afternoon paper reporters were, of course, only in evidence at the start of the incoming caravan.

There was also a considerable contingent of



Submerged Wisconsin Road



At Summit Lake

# MOTOR AGE

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## MODERN BODY DESIGN

Patriotism notwithstanding, the European automobile makers are a lap or two in advance of American makers in the production of bodies. Probably the execution—workmanship, finish, etc.—of their best bodies is no better than that of our best bodies.

But they lead in the creation of new designs. Nearly all of our popular bodies are copied from European styles, much as our coats and pants are copied from their coats and pants. This does not matter so much.

There is this, however, which is important—that we have an immense field before us in the production of new patterns of bodies, even if for the style of design of these patterns we are debtor to the great coach body makers who produce the bodies for the European-made chassis.

The small car trade takes care of itself along other lines, but one of the best health foods for the large car trade is the origination of new and special bodies which can be adapted to a standard chassis and which will attract a certain class of buyers who wish something different for the mere sake of difference or for the actual difference in the purpose to which the car is to be put.

All kinds of bodies which are adaptations and remodelings of standard patterns are becoming popular in Europe.

Will we see a lot of these at next winter's shows? The growth of the industry demands that we shall.

## POLICE TRAPS

In some localities, especially in suburbs of large cities, the local authorities have established traps whereby motorists may be taken unaware in the midst of their sin—that of driving faster than a walk.

This game is especially popular in England. In fact it has reached such a degree of favor that the English motor car papers have taken to publishing lists of established traps that their readers when motoring into the region of green fields and bubbling brooks may not also motor into the arms of the law.

Tramps, too, have found it to their advantage to post themselves along roadways to warn—for a consideration—automobilists of their near approach to a rural "bobby" with stop watch and marked course.

It is all more or less humorous—this practice of the police of using sleuth methods in order to catch automobilists in the act of rule breaking, and this practice of the automobilists of publishing directories of traps and of

patronizing tramps in order to safely dodge unregistered traps.

There is perhaps no funnier phase of motoring than that played, say, by a couple of park policemen who stand by the hour, each with a watch in one hand and a string in the other and with eyes glued to the roadway.

A jerk of the string, a snap of the watch and you, Mr. Motorist, are "it" next morning in a justice jobbery.

It is like sitting up in bed all night waiting for a chance to shoot a burglar.

The law makers and those who are intended to enforce them are, in the matter of traps, wire cables, etc., over-reaching the necessity.

Automobiling, regardless of its reckless few, is no such nightmare that martial surveillance is needed. If motorists are not rational enough to drive their cars with consideration for others, no amount of trapping will affect them.

It simply puts a new zest into the game of scorching. It makes a new sport, this trap dodging. It joins the motorists into a clan against another clan—the police.

It is irrational and cannot be long-lived.

## BUILDING A NEW CAR

There are ways innumerable in which to proceed in the production of automobiles. Every factory man has his own notions about such matters.

A certain designer recently outlined his method of producing a new model to a MOTOR AGE representative. It was interesting and, while it may be in practice by others than the gentleman who explained it, the policy brought out seems so sensible that it is worth repeating.

This builder first determines what style of car he wishes to build.

Then he roughly designs it and makes more or less elaborate drawings of the parts, according to their character. For some parts no drawings at all are made.

Each part is made in the best way possible without the use of special machine appliances. Much of the work is straight hand work. The car is gradually assembled and in several in-

stances the erection includes the old practice of "try and fit."

Finally a car is produced which, in general design, represents the desired result, but which in many details is rough and without commercial finish.

This car is given a thorough and severe testing. Weak spots are watched for and desirable changes both in design and construction are recorded. In some instances these changes are actually made on the car.

Gradually the process of elimination, substitution and general refinement proceeds until the builder is satisfied that the car is "right."

Then it goes back into the shop and the work of reproduction is considered.

The actual working drawings are made and in the production of each part methods are selected which will combine economy in manufacture with the desired mechanical result.

Prior to this time not a gauge, templet, jig, form, die, tap or reamer has been made. Now all these are made and when the actual production of cars for the market is begun it is on a basis which permits the erection of the entire season's lot without a single change.

From this time all cars go out from the shop as nearly exact duplicates as it is possible to make them.

By having done all the experimenting upon one car at one time, the cost of it has not been great; while by making all of the marketable rigs by exact processes of manufacture the cost of production has been reduced.

A good car is accordingly produced at a moderate cost and sold at a fetching price.

## SPRINGS AND PUNCTURES

During a discussion on tires in a New York uptown salesroom recently one of those present said: "It's a strange thing but I often find that tires of the same make will vary in punctureableness. We use the tire on most of our machines and I seldom have any trouble, but we received a new car recently, fitted with this tire and almost every time it goes out it returns with a punctured tire. I call it a hoodoo on tires. We thought at first that maybe there was something the matter with the rims. We have tried other tires on the same machine but still the trouble continues. I can't make it out."

"The trouble isn't with the tires," remarked a well known manufacturer who was present, "it is with the machine. Some machines have springs which are springs in name only. They are not hung right and are too small and stiff for the weight of the carriage. In a case like this the tires suffer, any obstruction in the road being forced in the unyielding tire. The result is numerous punctures. The French manufacturers realize this and the few punctures received by foreign cars very often causes credit to be given to the foreign tires when as a matter of fact the same tires, as good as they are, on other cars would puncture readily."

It has been suggested by Punch, of London, that each motor car be made to emit a separate and distinct odor, which should be registered for purposes of identification. The Autocar thinks that under the present condition of affairs in parliament the motorists would be inclined to use bisulphide of carbon, sulphureted hydrogen or other chemicals, whose odor resembles a concentrated essence of stale eggs.

## A REMINDER THAT

### FOUR YEARS AGO LAST WEEK

A company, the first of its kind, was incorporated by Philadelphia parties for the purpose of manufacturing liquid air automobiles. It was called the United States Motor Co.

### THREE YEARS AGO LAST WEEK

The Associated American Motorcyclists, an organization intended to be of national influence, was organized in Boston.

### TWO YEARS AGO LAST WEEK

The Automobile Club of America was engaged in picking petals off daisies trying to learn the fate of its proposed Buffalo-Erie road race.

### ONE YEAR AGO LAST WEEK

George Cannon made his first appearance with his steam racer, the occasion being the New York race meet at Brighton Beach, promoted by the Long Island Automobile Club.



## CROSS COUNTRY

### WHITMAN REACHES OMAHA

The copious rains in the west have dampened everything but the ardor of the Oldsmobile transcontinental tourists, who are still pushing eastward between showers. On August 23 they arrived at Omaha as the church bells were ringing, and the first thing L. L. Whitman did was to write *MOTOR AGE* concerning the experiences of the preceding week. He says:

"If you can find a small steamboat to exchange for an Oldsmobile perhaps we might trade, if the rain continues in Nebraska. We stopped in several towns for a day or two each, and good boating was the rule in all the streets. In the country a few high hills showed above the water, and we took to these out of Cozad and along the Platte river going south and out through Lincoln. One or two heavy showers of rain each day for a week kept things moist.



Iowa Mud

## AUTOMOBILING

### 1,000 MILES IN NEW ENGLAND

R. B. Kerr, ex-secretary of the National Golf Association, has recently completed a tour of 1,000 miles in New England, using a 16-horsepower Locomobile gasoline touring car. Mr. Kerr said he did not have any trouble with the car either on hills or bad roads, although the roads were particularly bad along the Shore line between New York and Boston.

### ST. LOUIS TO CHICAGO

Henry Stewart, of St. Louis, left that city on a motor bicycle Monday morning, August 16, at 5 o'clock, bound for Chicago. He reached Springfield, Ill., at 5 p. m., being 8 hours on the road, actual running time. The distance is 125 miles. After leaving Springfield he had a breakdown about 10 miles from the city and had to walk back for repairs. From Springfield to Bloomington the



Through Sage Brush Country



Two Styles of Overland Traveling

"While I am speaking of mud let me say of all mud this takes the cake. It slips like lard. The rear wheels can spin for hours in a mud slough and there need be no fear of wearing the tires—or getting out of the hole,

either. As we were not in a race we took a little turn at the game every day or two and arrived at Omaha today. The country looks green because of so much rain, but I think we looked greener, at least at times.

"We found friends here in Omaha and are making a short stop to let the country settle, but even now a terrific shower and downpour assures us of the 'beautiful mud' that may be found if one is anxious for it. If Dr. Jackson will loan us his dog, Bud, we can send him ashore with the rope when the machine begins to float, as I believe he said the dog was trained to do this class of work. Some of the pictures we took along the road tell the story more graphically than words."

### STEAM TRIP THROUGH ENGLAND

Mr. and Mrs. Richard Billings and chauffeur, of New York, recently completed a tour of 1,300 miles through England in a Locomobile steamer. No mechanical trouble whatever was experienced on the entire distance, not even a punctured tire offering annoyance. The tubes were pumped up only once during the run. While the immunity from trouble was partly due to the excellence of the British roads, there were parts of the route where the roads were indifferent, and some steep hills were encountered. Fisk tires were used on the journey.

riding time was 7 hours and 35 minutes, and from Bloomington to Chicago the time was 10 hours and 20 minutes. The riding time for the entire trip was 31 hours. Stewart rode a machine he built himself.



Near Hastings, Neb.

MOTOR AGE



MOTOR AGE

The Prevailing Nebraska Road



## MAKES FAST UPHILL KILOMETER

### Rigolly With Big Gobron-Brillie Wins the De Caters Cup in the Laffrey Hill Climbing Contest—Summary of Events

The third annual hill climbing competition at Laffrey, France, was held August 8, and the records of last year were broken. The trials began early in the morning, nearly all the contestants being on hand at 3 a. m.

The hill has a rise from 9½ to 13 per cent. The interesting feature of the competition was a standing start, 1-kilometer, uphill run for the de Caters cup. This cup was won last year by Leon Serpollet, in 59½ seconds. This year Rigolly made the kilometer in 50½ seconds. There were thirteen competitors for the cup. The heavy car race, 6½ kilometers uphill, was won by Rigolly in his 100-horsepower Gobron-Brillie in 5 minutes and 33 seconds. Duray, in a Gobron-Brillie of the same power, was second in 6:08½.

In the tourist class, for the same distance, the winner was De Rougemont in a 60-horsepower Mercedes, time 7:15.

A 12-horsepower Gardner-Serpollet omnibus with fifteen seats, driven by Le Blon, climbed the hill in 36 minutes and 43 seconds, making a speed of over 6 miles an hour.

In the light car class, Beconnais, in a 50-horsepower Darracq, was first in 6:12½; Osmont was second in a similar car, in 6:44½.

In the voiturette class, Wagner in a 20-horsepower Darracq, was first in 6:13, and Villemain, second, in a similar car, in 7:02½.

#### WAS UNABLE TO BETTER 1:16

Kokomo, Ind. Aug. 21—Fully 3,000 people witnessed the automobile races here yesterday, it being the greatest attendance ever seen at the driving park. Owing to the illness of Tom Cooper his machine was driven by Harry Cunningham.

In the 5-mile race Oldfield won in 7:21½, his fastest mile being 1:20. In the race to lower the mile record of 1:16 on a half-mile track Oldfield went the two halves in 1:19.

In the 3-mile handicap for amateurs the winners were Apperson, Barnes and McClain. They all drove Apperson cars. The best time in the four 3-mile events was 5:17¼.

#### RACES FOR STOCK ROAD CARS

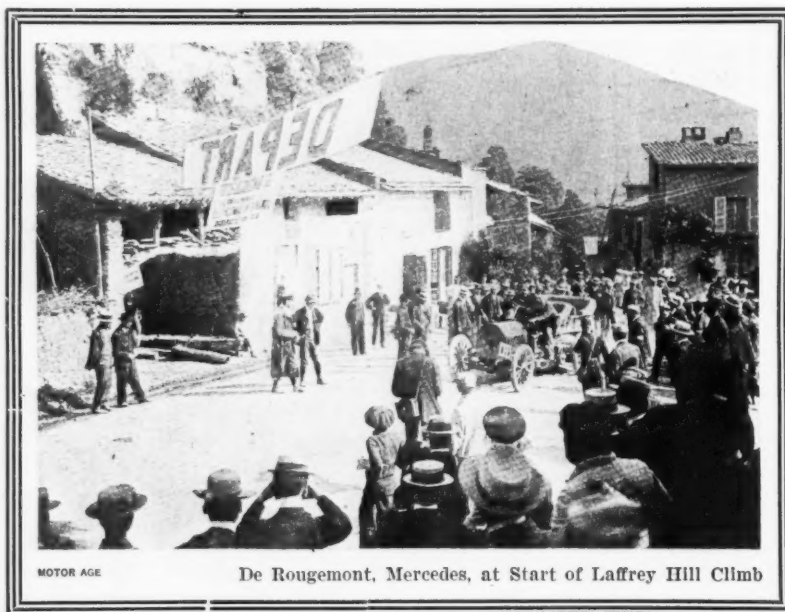
Minneapolis, Minn., Aug. 24—Prospects for fall races are bright. The plans for a race meet the week of September 7, to follow the state fair, will not be carried out, but it has been semi-officially announced that a meet will be held at the Hamline track during the week of September 21.

Following the successful summer meet, many of the Twin City enthusiasts, and especially the dealers, said that they would not care to again enter a meet, if it was necessary to strip their machines. The rainy weather which prevailed during the period of the postponed former races made it necessary for many owners to keep their machines in racing shape for 2

weeks, and as a consequence, it caused them much inconvenience.

R. F. Jones, who managed the previous meet, and who is behind the September event, has announced that the races next month will be principally events for full rigged cars. Runabouts will play a prominent part, and big tonneau machines, loaded with passengers, will enter the events.

There will also be speed events for some of the more powerful machines, and Mr. Jones in planning to add two or three special attractions, the nature of which has not yet been announced, although it is hinted that the ex-



De Rougemont, Mercedes, at Start of Laffrey Hill Climb

ample of eastern meet promoters will be followed and one or more match races put on.

## WILL HAVE ITS THIRD MEET

New York Schedules Fall Races at Empire City Trotting Track—European Racing Stars Wanted

New York, Aug. 24—Secretary Reeves, of the Empire City Trotting Club, will surely give a meet at the Yonkers track this autumn. It will wind up the track circuit. October 24 is named as the date. Mr. Reeves says that date will by no means be too late in the season and will give the millionaire owners of the fast flyers time to get back to town from their summer travels and residences.

In a talk over the phone with a MOTOR AGE man this morning Secretary Reeves said:

"I have, as yet, received no answers from Jenatz, Gabriel or Jarrott, to whom I wrote a fortnight ago offering expenses, a share of the gate receipts and a liberal guarantee for a race with Barney Oldfield at the Empire City track as the chief attractions of a fall meet. Charley Wridgway has also written Jarrott, a former racing mate of his, urging him to come.

"Even if I fail to get one of the European cracks to cross the ocean, we will not be without a big attraction, for in that event I will match Tom Cooper to race Barney Oldfield, the former to use the '999' record breaker and the latter the eight-cylinder Winton. Cooper has scored 58 seconds already with his flyer and practice should bring his time down to within striking distance of Oldfield's 55 4-5."

## BAKER BUILDS ANOTHER TORPEDO

### Will Have a Second Special Electric Racing Car in the September Track Events—Rockefeller Becomes Motorist

Cleveland, O., Aug. 24—Many Clevelanders have tried to secure license tag No. 999. The winner of this much sought number is Walter C. Baker of the Baker Motor Vehicle Co., and the car on which it will be used will be the successor of the ill-fated Baker Torpedo which attracted much attention at several meets last year after it had crashed into a crowd of spectators on the Long Island course. The new car is designed after the Torpedo, but is a much smaller machine and is said to be considerably faster.

It weighs only about 700 pounds and is fitted with the standard Baker motor and twelve cells of battery the same as the standard Baker. The wheels are fitted with 2-inch Palmer racing tires and have wind shields. The steering apparatus has been improved and the car is somewhat longer than the old Torpedo. The body differs in shape and is designed to offer the slightest possible resistance to the wind. The light running qualities of the car may be judged from the fact that the draw bar pull in start-

ing with two men on board, is only 4.45 pounds. The draw bar pull of the standard Baker, which is noted as being an exceedingly light running car, is 6.75 pounds.

Mr. Baker will operate the car and will be prepared to meet all comers with electric vehicles at any distance from 1 to 25 miles. Mr. Baker will give an exhibition at the Cleveland meet and will also compete in the race for electrics. It is to be hoped that there will be a number of contestants for this event.

If imitation is sincerest flattery, then the Detroit Automobile Club flattered the Cleveland Automobile Club when it designed its race meet entry blank. The two are as near alike as two peas. The Cleveland pamphlet bears on its back page the statement: "The Glenville track is the fastest mile oval in the country." The Detroiters went one better and said "Grosse Pointe track is the fastest and most beautiful mile track in America."

#### COULD AFFORD ONLY AN OLDS

John D. Rockefeller, Cleveland's richest citizen, who since the advent of the automobile has been an avowed enemy of the improved mode of transportation, has capitulated and is now the owner of an automobile. Ralph M. Owen of the local Oldsmobile Co. was the salesman whose eloquence caused the change of heart. Mr. Rockefeller said he could not afford a larger car now but hopes to save up money enough to buy a touring car next season. The adoption by Mr. Rockefeller, of the automobile is a matter of some consequence to Cleveland's trade. The people have grown accustomed to seeing him travel up and down Euclid avenue in a trap

and the fact that he has taken to the automobile should add considerable impetus to the trade from a certain class of people. Saturday the city clerk received the following communication:

Forest Hill, Aug. 22—City Clerk, Cleveland, O.—I would be pleased to have you permit my steward Henry Tigemeyer, to register my automobile. Thanking you kindly, I am, respectfully—JOHN D. ROCKEFELLER.

The automobile number awarded to Mr. Rockefeller is 1,003 which indicates that Cleveland's automobile population has passed the thousand mark.

## TWO BIG RACING PROGRAMS

**Detroit Offers Sixteen Events as Attraction at Grosse Pointe—Makers' Challenge Cup To Be Contested**

Detroit, Mich., Aug. 25—The third annual meet of the Detroit Automobile Racing Association will be held under the auspices of the Detroit Automobile Club at the Grosse Pointe track, Monday and Tuesday, September 7 and 8. The list of events will be as follows:

Monday, September 7—Five-mile race, open to cars under 1,200 pounds; 5-mile race, open to cars under 2,000 pounds; 5-mile handicap for Detroit owners; cars must have road equipment and carry four passengers; 5-mile race for manufacturers' challenge cup; 10-mile open; 5-mile special pursuit race, Oldfield and Cooper; 1-mile race by electrics; record trials.

Tuesday, September 8—Three-mile race for cars under 800 pounds; 2-mile race for electrics; 5-mile open; 5-mile special pursuit race, Oldfield and Cooper; 10-mile handicap for cars under 1,800 pounds, 3-minute limit; 10-mile open; manufacturers' record trials.

All races will be from a standing start and only first prizes will be given. Entries close September 6, and all applications for entries and information should be addressed to E. H. Broadwell, secretary, 254 Jefferson avenue, Detroit, Mich.

## JACKSON MOUNTS PLATFORM

Dr. H. Nelson Jackson, of Burlington, Vt., hero of the pioneer transcontinental tour, has been invited to lecture before the Automobile Club of America next winter on his experiences during the long journey from the Pacific to the Atlantic in a Winton, and has accepted the invitation.

## THE MAYOR AND COUNCIL DIVIDED

**Toledo Aldermen Wish to "Regulate" Automobilsts While Sam Jones Says "Leave Them Alone"—Motoring Increases**

Toledo, O., Aug. 24—Toledo is not the greatest automobile town in Ohio, and it may never rival Cleveland as a manufacturing center. The quickly widening interest in automobiling, however, bids fair to result in placing Toledo well up in the list. There are about 265 motor cars owned in the city and it is easily probable that this will be increased to 300 before the season draws to a close. There is an active club of eighty members, from whose headquarters in the Spitzer building weekly runs are started every Saturday afternoon. These are informal affairs but have served to keep the members together and to broaden the enthusiasm and influence of the club.

### MAYOR JONES SENSIBLE

In the way of regulations the motorists of Toledo are living in an undetermined state. The council a short time ago passed a licensing and numbering ordinance which was not exactly to the taste of the automobilists and its enforcement is a matter of daily threat. The automobilists, and the club men especially, are planning a vigorous legal campaign should the matter be pressed and they are, in a way, backed by the mayor. At least they have the moral support of "Golden Rule" Sam Jones, for this political oddity refused to sign the ordinance when it was passed by the council, saying that it was unfair and unnecessary. Mayor Jones depends upon the decency of human nature as the best regulator of the use of automobiles, and the council depends upon its own strength to pass such ordinances over the mayor's head.

### THE AGENCIES

Three dealers, each of whom conducts a well equipped repair and storage station, control the selling of automobiles in Toledo. The Kirk-Hall Co. has the largest line. This includes the White steamer, the Oldsmobile, Yale, Ford and Toledo gasoline cars and the Buffalo and Waverley electrics. The Toledo Motor Car Co. sells the Haynes-Apperson, the Pierce motorette and the Arrow motor car, the Overland and the Winton. The Lichtie Automobile Co. is

agent for the Cadillac and the National electric. All of the cars represented in these lines have met with a fair sale and the market seems to be holding up well during the late summer with excellent prospects for autumn business.

At both of the local factories, that of the Pope Motor Car Co. and of the Kirk Mfg. Co., extensive preparations are being made for increased production next season. Toledo is fortunate in that while it has but two large factories, both are aggressive and builders of high class cars. Each concern promises great surprises in the way of 1904 models.

## PITTSBURG CLUB CO-OPERATES

**Arrangements Made for Races and Other Contests To Be Held at Terminus of Fall Endurance Run**

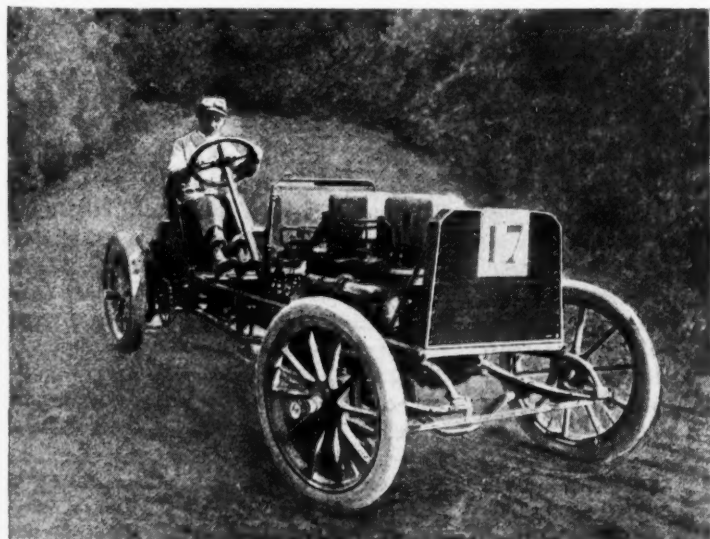
Pittsburg, Pa., Aug. 26—Manager S. A. Miles, of the National Association of Automobile Manufacturers, was here yesterday to arrange for the races and other contests which will conclude the events in connection with the endurance run in October.

The races will be held on the Matinee Club's track at Island Park on October 16 and 17 under the auspices of the Pittsburg club and the association. The hill climbing and brake contests will take place Thursday, October 15, in Schenley park. Six big excursion steamers will run to the island where the races are to be held. This island is 2 miles down the river and is a favorite resort for Pittsburgers.

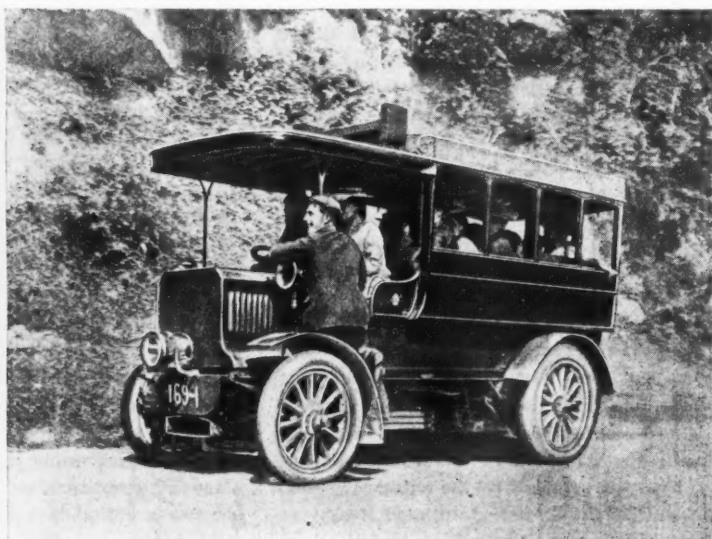
## FLORIDA DATES SETTLED

W. J. Morgan has announced the dates of next winter's tournament of the Florida East Coast Automobile Association to be January 25 to February 6. The first two days will be devoted to parades and preliminaries and the last four days of the first week to racing and record trials. The additional week is to enable those who care to go for additional records to do so. One of the events will be a 100-mile race, five 20-mile trips with turns. This race may be contested annually.

Efforts are being made to arrange excursions by the railroad and sea to Florida next winter, and as the New York show dates are January 16 to 23, it is thought a train excursion can leave New York January 24 and one by sea a day earlier.



Rigolly on His Big Gobron-Brillie



The Gardner-Serpollet Steam Omnibus in Laffrey Hill Climb



## ITS PROGRAM DEFINITELY ARRANGED

### Syracuse Ready for Entries for Its Long Heralded Meet—Popular President of Club and Veteran Motorist Dies Suddenly

Syracuse, N. Y., Aug. 26—The Automobile Club of Syracuse has authorized the committee on runs and tours to go ahead with the program for the races at the New York state fair, September 12. The committee, which consists of C. A. Benjamin, Secretary F. H. Elliott and H. W. Smith, has accordingly completed the program under the sanction received from the American Automobile Association. The list of events follows:

Two-mile race for motor bicycles, regular stock machines; 5-mile race for cars under 1,200 pounds, all motive powers; 5-mile race for Winton touring cars with tonneaus attached; 10-mile race for cars under 1,800 pounds, all motive powers; 5-mile handicap for club members only, each car to have regular road equipment; 5-mile race for Franklin cars; 15-mile open.

#### THREE-CORNERED MATCH

These numbers will be followed by record trials by all the cars which have taken part in other races. The next event will be a special three-cornered match race, best two in three, 5-mile heats, flying start, between Jules Sincholle, 40-horsepower Darracq; George Papillon, 40-horsepower Darracq, and Henri Paige, 40-horsepower, Decauville. These are three French cars which are said to have competed in the Paris-Madrid race, and all have gone under 1:05 in track competition. This race will be followed by a match between John Wilkinson of this city on his 10-horsepower Franklin and a person whose name will be announced later.

The conditions of the races are as follows: The course is the regulation mile track, 100 feet wide; the first race will start at 2 p. m. sharp; all races will be from flying starts except the 5-mile handicap; the entry fee will be \$5 for automobile events and \$2 for the motor bicycle race. The fee must accompany each application; first prizes only will be given and these will be sterling cups of special design. All applications for entry should be mailed to C. A. Benjamin, Syracuse, N. Y.; entries to close Wednesday, September 9.

It is expected that John Astor will attend the fair and the races. Secretary Elliott and C. A. Benjamin have been authorized to go to New York to meet the officials of the Automobile Club of America and if possible to influence that body to make a run to Syracuse during State Fair week. Mr. Elliott has been given full charge of the program for the meet and authority to open headquarters down town.

#### CLUB PRESIDENT DIES

Terrence D. Wilkin, president of the Automobile Club of Syracuse, died last Tuesday evening at the Hospital of the Good Shepherd, where he was taken after having suffered a stroke of paralysis upon the afternoon of that day. Mr. Wilkin was apparently in perfect health and started to mail a letter, which he dropped. He walked into the drug store of Willet Brown, a member of the automobile club with whom he had an appointment to go to his summer home at Cazenovia, and fell to the floor. He never recovered consciousness and died at 9 p. m.

Mr. Wilkin, aside from his interest in automobile affairs, was one of the best known men in this city and was manager of the local office of R. G. Dun & Co. He was born at Rochester 56 years ago and had lived here 23 years. He served during the civil war and suffered for 8 months in Andersonville prison.

Mr. Wilkin was the first man in Syracuse to own an automobile, taking the initiative in 1899. He had been president of the club since its foundation. He was a member of the Onondaga Country and Golf club, the Citizens Club and the Century Club and was an enthusiastic fisherman and hunter. He also belonged to the Triton Fishing Club of Canada. Mr. Wilkin took a more or less active part in politics and had represented his ward several times in the council. The Syracuse Automobile Club held a special meeting and adopted the following resolutions:

Resolved—The all-ruling power to whom we are accountable has removed from us at the time of his full zenith for good, our associate and friend, Terrence D. Wilkin, and in such an act of Providence we are bereft of a very dear friend, a man of whose integrity of purpose was unquestioned, and a man whose high ideals in life were examples for all men in every avenue of life. His loyalty to his friends and his nobility of character ingratiated him into the hearts of all. The precepts laid down by our departed friend were those calculated to actuate us to higher motives in life.

#### TWO OVERLAND TRIPS

Mr. and Mrs. C. A. Benjamin returned Tuesday from a week's automobile trip of 700 miles through this state and Canada. They went completely around Lake Ontario, visiting Rochester, Charlotte, Buffalo, Niagara Falls, Hamilton, Toronto, Kingston and Gananoque. The trip was delayed a half day by customs officers who made Mr. Benjamin deposit \$50 with the customs collector and put up a bond signed by three persons known to the collector to insure his return to this side. The roads through Canada were fine.

Mr. and Mrs. Joseph R. McGlashan and Rev. and Mrs. J. H. McDonald, of Chicago reached this city Monday afternoon of last week on their way to New York, Boston and other cities. They found good roads as far as Rochester, but between Rochester and Syracuse they were extremely poor.

#### MOTOR CYCLE CLUB FOUNDED

The Syracuse Motor Cycle Club was formed a week ago with the following charter members: Dr. C. O. Regener, Dr. S. S. Bibbens, George L. Potter, F. Ginkel, H. Bush, H. Chape, James B. Woodruff, R. C. Thurwachter, H. P. Bellinger, Aurin M. Chase, C. C. Taber and Francis Hall of this city, and M. Palmer, of Fulton. The club has already held a run to Fulton and will hold another soon to South Bay. In all there are twenty-three motor cycle riders in town.

#### NO RACES IN BOSTON

Boston, Aug. 22—President James T. Souter, of the Massachusetts Automobile Club, returned to Boston during the week, and then the question of a fall race meet was thoroughly discussed. The impression prevailed that it was rather late to start to arrange a meet for Labor day. The fact that Detroit and Cleveland would attract the better known class of operators, was acknowledged. The chances are that no race will be held in this section this fall, and that the club will reserve its strength until next year when it will endeavor to arrange another big spring meet.

## CORRAL AGENTS AND PARTS MAKERS

### Association of Licensed Automobile Manufacturers Intends To "Let No Guilty Man Escape"—Action at Niagara Falls

Only three of the twenty-seven members of the Association of Licensed Automobile Manufacturers failed to be present at the meeting at Niagara Falls last week. One of these three started to the meeting, but was called home before reaching the falls.

At the meeting it was decided that agents who handle association cars will not be permitted to handle unlicensed vehicles. They will be required to sign a uniform contract binding themselves to such an agreement. It was also decided that parts makers shall not sell parts covered by the Selden patent to other than members of the association.

#### "RESOLVING" THE AGENT

The following resolution was adopted:

"Resolved, That all the members of this association from now on embody in all contracts made by them with agents for the sale of their products, and in any and all arrangements, either verbal or written, in regard to the sale of vehicles, they conform in full with the spirit as well as the letter of these articles the following clauses: 'In consideration of the fact that the party of the first part has obtained a license under Selden patent No. 549,160, and is paying substantial royalty thereunder, and has agreed as a condition of said license not to contest said patent directly or indirectly, or aid others in so doing; now, therefore, the party of the second part, in consideration of being appointed an agent for the sale and disposition of the automobiles manufactured by the party of the first part, agrees that during the continuance of such agency he will not infringe said patent, nor sell, keep on hand or dispose of, directly or indirectly, any automobiles containing the inventions claimed in said patent No. 549,160, not duly licensed under said patent.'"

#### STANDARDIZATION CONSIDERED

The report of the technical committee recommended that certain parts of gasoline automobiles should be standardized. The parts to be made standard will not be announced at present.

The policy of the executive committee regarding the enlargement of the membership was endorsed by the full board. The next meeting will be held in New York September 23, 1903.

The members in attendance at the meeting were:

Electric Vehicle Co., M. J. Budlong and H. P. Maxim; Winton Motor Carriage Co., George H. Brown; Packard Motor Car Co., S. D. Waldon; Olds Motor Works, F. L. Smith; Knox Automobile Co., E. H. Cutler and A. E. Smith; Haynes-Apperson Co., E. H. Haynes; Autocar Co., Louis S. Clark, Jr., and J. C. Speirs; George N. Pierce Co., Charles Clifton and George N. Pierce; Apperson Bros. Auto Co., Elmer E. Apperson; Locomobile Co. of America, S. T. Davis, Jr., and A. L. Riker; Peerless Motor Car Co., L. H. Kittridge; Waltham Mfg. Co., H. C. Williams; Pope Motor Car Co., A. E. Schaaf, George Pope, C. E. Walker and C. L. Pepper; J. Stevens Arms & Tool Co., C. C. Hildebrand and J. Frank Duryea; Berg Automobile Co., Hart O. Berg, A. L. Gar-



ford and H. H. Eames; Northern Mfg. Co., V. M. Gunderson; Pope-Robinson Co., Col. A. A. Pope; Kirk Mfg. Co., Ezra E. Kirk; Elmore Mfg. Co., J. H. Becker and B. A. Becker; E. R. Thomas Motor Co., E. R. Thomas; Buffalo Gasolene Motor Co., A. Snyder; Cadillac Automobile Co., William E. Metzger; H. H. Franklin Co., H. H. Franklin; Charron, Girardot & Voigt Co. of America, A. D. Proctor Smith; General Manager George H. Day, and H. F. Cuntz.

### RACES ON SEA BREEZE COURSE

New York Motor Bicyclists Arrange Speed and Endurance Trials for Manhattan Beach Track

New York, Aug. 24—The New York and Alpha motor cycle clubs have prepared a fine program of track contests of speed, skill and endurance to be run at Manhattan beach on September 5 and Labor day in connection with the national league organizing convention on Labor day at the Kings County Wheelmen's clubhouse, Grant Square, Brooklyn, which is also the Alpha club's headquarters.

There will be an open 10-mile handicap over the Coney Island cycle path and boulevard early on Labor day morning. The program at the track "swept by ocean breezes" follows:

On Saturday, starting at noon sharp, there will be a 4-hour amateur race for motor bicycles not exceeding 5 horsepower and equipped for pedal propulsion. There will also be prizes for the leaders at the end of each hour, and a special prize for the first contestant covering the 4 hours without a stop.

The Labor day interests will start at 2 o'clock in the afternoon, following the morning's convention. The events will be:

One-pint gasoline consumption test; gold, silver and bronze medals to the three contestants completing the greatest distance with that quantity of fuel; to qualify for a prize contestants must average not less than 3 minutes per mile.

One-mile novice for motor bicycles not exceeding 4-horsepower; prizes, three medals.

One-lap motor bicycle skill competition, trials to be made up singly. Contestants will be required to ride over, around and between obstacles placed on the track, such as across a board 6 inches wide; to dodge dummy dogs, etc.; to ride through an elastic gate, to ride 50 yards, hands off handle bars, etc. Three prizes; points to count. In the event of a tie, time will be considered.

Three-man team race; unlimited pursuit. Five-mile handicap.

Entries close with George McCormick, St. Paul building, New York, Wednesday, September 2.

### NEW SUIT AGAINST CHICAGO

A bill attacking the validity of the automobile ordinances now being enforced by the city of Chicago was filed in the circuit court Tuesday by the Woods Motor Vehicle Co. and fifty other complainants. They ask that the ordinance be declared void and that the city be enjoined from causing their arrest or prosecution on account of alleged violations of the ordinances.

City Electrician Ellicott now has about sixty cases of alleged violations on file at his office.

## DISPUTING CLEVELAND'S POSITION

### Detroit Bids Fair To Become the Automobile Producing Center—Builds Sixty-Five to Seventy-Five Cars Each Day

Detroit, Mich., Aug. 24—Detroit stands a good chance to wrest from Cleveland the honors of being the western, if not the national automobile center. In the first place its populace is automobile crazy, almost, and in the second place it produces from sixty-five to seventy-five automobiles a day, with a likelihood of producing a hundred or more each day next season. True, most of them are little ones—runabouts or light road wagons—but with the new Packard factory nearing completion the production of big Packards in Detroit is almost in sight.

#### SIXTEEN MILLION A YEAR

In number of cars produced the Olds motor Works of course leads. Thirty-five to forty cars a day are sent out. At the Cadillac from fifteen to twenty a day are finished, the Northern company completes about seven or eight and the new Ford factory produces thirty a week or five a day. Taking the production at sixty-five a day and making the retail price of all the lowest—without tops, tonneaus or other extras—Detroit produces \$45,600 worth of automobiles each day. If this be maintained throughout the year the total production would equal \$16,644,000. Assuming the production at this rate to actually continue for 9 months during the year, the yearly output would then represent \$12,483,000.

#### CARS REPRESENTED

There are only four retail agencies, three of them carrying large lines of cars. Best known is probably W. E. Metzger, "Billy" to the trade, and sales agent for the Cadillac. Of course he is local agent for the Cadillac as well. Besides it in his Jefferson avenue store are handled the Winton, Yale, Packard, Toledo and the Baker and Columbia electrics. L. P. Schnieder handles the Peerless, Northern, National electric and the Elmore. W. H. Weber, the only agent who is not on Jefferson avenue, sells the Rambler, Orient and Searchmont. The Oldsmobile Co., of which W. C. Rands is manager, sticks consistently to the Oldsmobile. The Detroit branch of the White Sewing Machine Co., of Cleveland, of course handles the White steamer, which, incidentally, is extremely popular here.

#### ONE MORE RUNABOUT FACTORY

Detroit is to have another factory, for the Mohawk Automobile Co. is being organized with a capital stock of \$400,000. James E. Davis, it is said, will be president of the concern and capitalists from Chicago, New York and Detroit are interested. The machine will be patterned after the popular patterns of light cars, and its principal features will be certain inventions of Oliver E. Barthel. The concern expects to erect a plant on the east side of the city.

Detroit has its beautiful Belle Isle, but a welcome feature will be added to it, if present plans do not miscarry. The proposition is to install motor busses in place of the heavy horse-drawn wagons now used to transport people across the long bridge and around the island on sight-seeing expeditions. At present a dozen or more wagons are in use, and the same number or more busses will be needed.

An experiment with one has given gratifying results and the installation of a full line will prove a most popular move, and should result profitably for the promoters.

George Bradbeer, who is associated with W. E. Metzger, started last Saturday at noon with a Cadillac for Wabash, Ind. Onsted, 75 miles from Detroit, was reached by way of Ypsilanti at 5 o'clock p. m. over roads in very bad condition. Sunday the journey was resumed to Coldwater through Jonesville, over roads that were sandy and hilly. On Monday the journey was made to Waters' Park, and Wabash was reached Tuesday noon. The Indiana roads were found to be in excellent condition.

## NEW KINK IN LEGAL TROUBLES

Washington Automobilists Have Added Unto the Ordinary Woes the Task of Fighting an Age Limit

Washington, D. C., Aug. 22—Applicants for permits to operate automobiles in the District of Columbia continue to besiege the municipal building where the automobile board is at present holding its meetings. An interesting question was presented to the board early in the week involving the age limit of operators. Two boys, one 14 and the other 15 years old, presented themselves for examination as to their fitness to operate an automobile. Each answered readily the questions put to them by the various members of the board and demonstrated beyond doubt their ability to operate a machine. On account of their youth, the board refused the boys the necessary permit, and now the corporation counsel is to determine the question. As the automobile regulation stands, it contains no limitation of age, and there is apparently, therefore, no provision in it for rejecting, solely on account of age, any applicant who passes the required examination. The district commissioners have been officially notified of the automobile board's action, and will consult the corporation counsel as to their legal authority in the premises before passing upon the question. The question is whether the commissioners have authority to remedy a defect in an act passed by congress. Washington is wrought up over the situation and the newspapers are printing a mass of stuff "as to boy chauffeurs."

### ROLLER BEARING FACTORY BURNED

The plant of the American Roller Bearing Co., of Boston, was totally destroyed by fire August 18, and all machinery and stock was a complete loss. The company had been making arrangements to get into a plant outside of Boston and had already placed orders for new machinery which would enable them to double the capacity of the Boston plant. The new plant will be put into running shape at once and there will be no serious delay in filling orders.

### FORD STRIKES NEW YORK

C. A. Duerr & Co., 152 West Thirty-eighth street, New York, who have taken the New York agency for the Ford car, received their first machine last week. The car has attracted considerable attention in the metropolis. The firm is contemplating moving to larger quarters, further uptown, the firm's business having outgrown their present headquarters. This move contemplates the enlargement of the garage end of the establishment.

## MAKE IMMEDIATE DELIVERY NOW

**Chicago Dealers Have Caught Up on Orders—  
Prospects for Fall Trade Are Bright—  
1700 Cars In Use in the City**

Chicago, Aug. 25—The dealers of this city are beginning to breathe a little now, as most of them can look a customer squarely in the face and promise him his car in a reasonable length of time. Some of them can even make immediate deliveries. The trouble nearly all this season has been to get a car to the anxious customer in from 60 to 90 days after the receipt of the order. This has not been a pleasant feature of the business, to either buyer or seller, as the buyer has seen the days go fleeting by, and instead of having an opportunity to violate the speed limit, he has had to content himself with the slow and sedate horse and carriage, and look enviously on his more fortunate neighbor, who took time by the forelock and ordered his car last winter.

### FEW SALES LOST

The dealer, on the other hand, has been worried because he could not accommodate anxious customers who vainly flourished a handful of bank notes in his face, offering them in exchange for immediate delivery of a car. About the only consolation for the patient dealer was the fact that all other dealers were in the same position and could not deliver any more promptly than he could. This condition prevented the customer from going to some other man and buying a car. Thus very few sales were lost because of slowness of delivery. The factories have in some cases been working day and night to catch up with orders, and now the sign, "Immediate delivery," may be seen posted in some of the stores of the city, and the dealer and customer are in a correspondingly good humor.

### 1,700 CARS IN TOWN

According to City Electrician Ellicott's license book there are now about 1,700 motor cars in the city. The owners of these having bowed to the inevitable and meekly paid the \$3 demanded by the city, over \$5,000 has passed over the counter into the municipal till. If this amount were used to repair the streets and make life and the roads smoother for the motorists, there would probably be less objection to paying the license. It would be as bread cast upon the waters.

### STEAMERS SELL WELL

B. G. Sykes, manager of the local branch of the Locomobile Co. of America, is well pleased over the business done this year, and when he goes to the factory at Bridgeport next week his greeting from Mr. Kingman will be a warm one, and a large red mark will be put down for the excellent work done this year by the Chicago branch. Mr. Sykes says he has sold fifteen steam cars to one gasoline this year, and now he has steamers dotting the country in all directions. The most popular pattern in steam cars this year has been the box front runabout, with the surrey a close second. The 1904 models of the two and four cylinder gasoline Locomobiles are now being received. There are some slight changes, but nothing radical. In steamers the company is not yet ready to announce the improvements for 1904, but there will likely be several. Manager Sykes says that business will be good this fall and he will be able to dispose of all the cars he can get from the factory. At pres-

ent he is about 30 days behind on gasoline deliveries, and is fairly prompt in the delivery of steam cars. In some styles, immediate delivery can be made, the cars being in stock.

### WINTONS POPULAR

There have been eighty-seven Winton cars sold at the Chicago branch this year, according to Jack Fry, Manager Tucker's assistant, and at least 90 per cent of this number went to Chicago buyers.

"It takes lots of dodging to keep out of the way of Winton cars in Chicago," said Fry, "because there are so many of them. We can make immediate delivery now, but we keep stirring up the factory, as the prospects for fall trade are that business will be brisk until Christmas eve, and then we will start on the new year. Yes, have a lead pencil on me," he continued, as the MOTOR AGE representative absent-mindedly picked up one of the 2-cent variety from his desk and walked slowly out.

### EXCELLENT FALL TRADE

At the office of Pardee & Co., Manager Fred Pardee was busily engaged figuring up the average number of miles per day made by Fetch and Krarup in their transcontinental trip with a Packard car, but he stopped long enough to say that business was good even for dog days, and that immediate delivery could now be made in all the lines handled by Pardee & Co. Most of the sales this year have been gasoline cars, although there has been a fair sprinkling of electric cars in the sales.

### CHICAGO HAS 400 OLDSMOBILES

"We have sold 185 Oldsmobiles this year," said James Levy, of the Githens Bros. Co., "which makes a grand total of about 400 of these cars in Chicago. Besides this number of cars disposed of in this city we have placed a great many in the surrounding territory. The people recognize that a maximum amount of enjoyment at a minimum amount of expense is offered them in the Olds, and this is making it a leader. The price is not always the bar to confine people to smaller cars. The little car will get them over the ground quickly and with small expenditure of either physical or mental effort, and these are points to be considered. The touring car is all right in spots, but there are more 'spots' which the small car fits satisfactorily. We can deliver an Olds now before the ink is dry on the purchaser's check, and if some one comes along with a desire for a Searchmont, it also is here for immediate delivery. We are expecting the Olds transcontinentalists, Whitman and Hammond, to arrive in Chicago about Saturday of this week, and we expect to give them a rousing reception. Quite a large number of motorists will go out to meet them and we would like all the Olds cars we can get to accompany the reception committee."

### NO CHANGE IN POLICY

The P. J. Dasey Co., 19 La Salle street, Chicago, wish it announced that the withdrawal of P. J. Dasey from participation in the active management of the business will in no wise affect the future conduct of it. The company states that it is in an excellent position to care for its customers, that an increased stock is to be carried and that all orders will be given careful, accurate and timely attention. The same general policy that has been maintained will be continued.

## CLEVELAND HAS ITS THIRD FAILURE

**The General Automobile & Mfg. Co. in the  
Hands of Receiver—Ohio Makers Have  
Plenty of Good Racing Cars**

Cleveland, O., Aug. 24—The General Automobile & Mfg. Co. has been placed in the hands of a receiver, making the third failure of a Cleveland automobile manufacturing concern this season. For some time past there have been rumors that the General company was in financial difficulties, but after the company had practically completed its season, it was believed that it would pull through.

L. J. Hammond was appointed receiver upon the application of the W. M. Pattison Supply Co. The plaintiff's claim was \$1,003 for supplies and machinery. Receiver Hammond is taking inventory and the exact condition of the company is not known. It is thought the liabilities are about \$50,000 of which about \$5,700 is due to employees for back pay. Mr. Hammond has applied to the common pleas court for permission to borrow \$10,000 for the purpose of carrying on the business. He claims that the company has on hand considerable material which could be built up into cars and sold at a much higher price than if sold as raw material.

### MANY ORDERS ON HAND

The company was organized about 2 years ago as the Hansen Automobile Co. Several months were spent in experimental work and a number of cars were built in the old Brush electric plant. A year ago the company was reorganized under the present name. The company's car was shown at the large automobile shows, where, the officials claim, orders for about 500 cars were taken. The prospects seemed bright. In the early part of the summer, the output reached a considerable figure, but of late the force was cut down. It is generally understood that the company shipped about 100 cars during the season.

Foster & Co., local agents for the General, lost a number of sales through inability to make deliveries. It is claimed that they sold about forty-five cars but were able to deliver only eleven of them. There are similar reports from different agents in various portions of the country. It is believed that about twenty-five cars can be built up from the material on hand.

### KONIGSLOW AFTER PRIZES

Otto Konigslow, the local manufacturer, has completed two new models. One of them is a light racing car with which Mr. Konigslow, Jr., hopes to clean up some of the prizes in future light gasoline events, while the other is a standard light car which will be built for next season's business. Mr. Konigslow is not yet prepared to formally introduce either of the cars.

### RACERS ABOUND IN CLEVELAND

Even if the September Cleveland events should be limited to local contestants, the races would be of a most interesting variety. The Winton company has overhauled the old Bullet and will place it in commission. Mr. Jack, who went abroad with the Winton party, will handle Percy Owen's machine, while Barney Oldfield will, of course, handle Bullet II. A race between these three famous cars would prove an attractive feature, and it is quite probable that such a match will be arranged. The White Sewing Ma-



chine Co. will have two new racers ready and it is understood that one of them will be handled by Hedges, the professional who was formerly with Harkness and later with the Mathewson Co. The Baker company's new electric racer will also compete in the open events and Konigsloew promises to have his light car ready for the meet.

### TESTS EDISON BATTERY AT HUB

**Boston Electrician Says Edison Battery Renders Good Service—Gossip of the Massachusetts Trade**

Boston, Aug. 22—President Edgar of the Edison Illuminating Co., is now testing an Edison battery in this city, with a view to its utilization in motor vehicles and in other work of the Edison company in Boston. The battery under inspection has sixty-eight cells, and its record is said to be 76 miles on one charging at an average speed of 15 miles an hour. It is also said that Cory hill, Boston's greatest incline, was successfully climbed by Mr. Edgar's machine, which is the first in this city to be equipped with these batteries. This battery weighs about 1,100 pounds, and the length of time to recharge it is about 2 hours.

During the past week George H. Lowe, New England manager of the White Sewing Machine Co. consummated one of the biggest real estate deals known in the local automobile world. He secured a long lease of the Panorama building on Tremont street, known as the Battle of Gettysburg, which he is to have remodeled and made into a garage. He will retain possession of his present quarters for several months, as it will take some time to remodel the building.

The building has already been used as automobile headquarters, as it was here that the New England Motor and Electrical Transportation Co. had its headquarters. It is Mr. Lowe's intention to establish a recharging station for electrics as well as to maintain a well equipped repair department for all sorts and descriptions of automobiles.

A. C. Morrison of the local branch of the Peerless Mfg. Co., is visiting the general headquarters at Cleveland, O. He is due to return to Boston early next week, and it is expected that one of the new four-cylinder cars will follow his arrival.

Harry Fosdick, of the local Winton branch, expects to drive a car in the Cleveland and Detroit races, and the Providence people are striving hard to bring about a match race between Fosdick and Snow, the latter of the Peerless branch.

### CALIFORNIA ROAD RECORD

R. C. Lennie and L. Andrews, with a Peerless touring car, established a new record from Del Monte to Oakland, Cal., last week, by making the distance in 5 hours and 50 minutes elapsed time. The best previous time was 6 hours and 5 minutes, and the distance is about 135 miles. The roads for over half the distance are rough. It is necessary to go over the San Juan grade to accomplish the trip, and as this grade is one of the worst in California a great deal of time was consumed. The actual running time was 4 hours and 45 minutes.

A number of other motorists left Del Monte with the intention of making fast time, but the constant watching for rural police with stop watches precluded record breaking.

## MOTORISTS INSPECT TARRED ROADS

### French Experimenter Demonstrates Success of His System to Interested Parties—Theory and Practice of Tarring

Road tarring experiments are being tried in this country and in Europe, and the experiments are being watched with a great deal of interest by motorists. The problem of laying the dust has become quite serious, and the final solution will naturally be hailed with delight by all who are interested in good roads.

#### IN USE A MONTH

Some experimental work has been done near Paris, France, under the supervision of Dr. Guglieminetti, and recently a number of road surveyors, automobilists, journalists and others were shown the results of the work. A road leading into the Bois de Boulogne from the Porte Doree had been tarred for a distance of 900 feet and for a width of 10 feet. It was first treated in May, and a final coat put on July 2, so that it had been subjected to the particularly heavy traffic through the gates for about a month.

Dr. Guglieminetti gave some interesting details about the economy of the system. He said that the success of the tarring treatment depends upon a number of conditions, the first of which is the state of the road. The macadam should not be too new or too old, as apparently the durability of the tarred layer depends upon the porosity of the surface. The road should be treated a month or two after it has been rolled. The road is swept carefully and the tar applied, and traffic is then barred from it for 3 or 4 days. During that time the heavy oils contained in the tar sink into the surface, forming an amalgam with the residuum or pitch, which hardens into a crust. This crust has a thickness of less than one-half an inch, and being of a yielding or elastic character, it serves to protect the oiled macadam underneath.

#### EASILY REPAIRED

The stretch at the Porte Doree had several places where the crust had been worn through, and this was explained by the doctor as being due to the presence of patches of dust which prevented the tar from being incorporated with the surface. He claimed that the only care needed for the maintenance of the road was the periodical inspection by a man with a pail of tar and a brush. By brushing the worn parts, the repairs could hardly be distinguished from the rest of the road.

Dr. Guglieminetti showed that the tar not only preserved the macadam, but that it had paid for itself in the economy in the sweeping of the roads.

### AUTOBIOGRAPHY IS REQUESTED

The National Association of Automobile Manufacturers has issued in pamphlet form the rules for the October endurance race from New York or Pittsburg, which were published recently in MOTOR AGE. It has also issued the entry blanks. Either may be obtained by addressing the association at 7 East Forty-second street, New York. In pursuance with the provisions in the rules to that effect, the entry blank contains a blank formally headed "Details of Entry," which, when filled out, in effect represents a summarized autobiography of the car. The details called for are as follows:

Name and address of entrant; name and address of operator; name and address of observer nominated by entrant; name of car to be entered; name and address of maker; class to which car belongs; retail selling price as equipped for contest; weight with tanks filled and car equipped for contest, but exclusive of extra parts; water capacity; gasoline capacity; number of passengers for which car is designed; number of cylinders; bore and stroke of motor; revolutions per minute at 20 miles an hour; arrangement and location of motor; two or four cycle; size of wheels; wheel base; form of ignition; special lubricating and other devices included in retail selling price; make of tires; single or double tube tires; size of tires; retail price per tire.

### SAD ACCIDENT NEAR CLEVELAND

**Mrs. W. H. Kirkpatrick, Wife of Sales Manager of Peerless Company, Killed in Motor Car Spill**

Cleveland, O., Aug. 24—One of the most serious automobile accidents on record in this section occurred near Little Mountain, 30 miles from this city, last Friday, resulting in the death of Mrs. W. H. Kirkpatrick, wife of W. H. Kirkpatrick, sales manager of the Peerless Motor Car Co. Mr. and Mrs. Kirkpatrick with two friends were ascending the steep grade up Little Mountain, and when rounding a curve the car veered into a ditch, and toppled completely over. All of the occupants were thrown out, but none of them went under the car. For a time it appeared that no one was injured beyond a few bruises, when suddenly Mrs. Kirkpatrick collapsed. Medical assistance was summoned but she never regained consciousness, and died in a short time. The physician stated that death was due to the shock. Mrs. Kirkpatrick had been in ill health for some time.

### CLASS IN MOTOR CAR PRACTICE

Minneapolis, Minn., Aug. 24—The Young Men's Christian Association, which has conducted a large night school for several years, will this fall add a course in gasoline engineering, as applied to automobiles and launches. There have been a great many requests for this course, and it will be a thorough one, in charge of an expert in automobile construction. The course will include the study of motors of various types, transmission gears, carbureters, ignition apparatus, and the valves and peculiarities of different fuels. The study will be practical with working models in the class rooms.

An agency for the Haynes-Apperson cars has been established in Minneapolis by H. J. Mich, who has opened salesrooms in the rear of 13 Fourth street, South. Mr. Mich has had the Haynes-Apperson cars on hand but a few weeks, but has already delivered three machines and has placed orders for several more.

Dr. C. E. Dutton, a recent purchaser of a Haynes-Apperson, will start for Chicago the first of next week. Dr. Dutton will go alone, and will endeavor to cover the distance in something like record time.

Ray Owen, of the Oldsmobile Co., of New York, says that the Pirate, the 850-pound 10-horsepower Oldsmobile racer which made the world's straightaway mile record in its class on Ormond beach last winter, is to follow the autumn track circuit and compete in all the open events to which it is eligible.



## THE READERS' CLEARING HOUSE

### THOUGHT \$16 WAS EVERYTHING

Columbus, O.—Editor MOTOR AGE—Relative to the misunderstanding that arose at the time of the temporary difficulty between the Columbus Automobile Club and the Driving Park Association an interesting lesson in race meet ethics arose.

Thanks are due to the American Automobile Association, which stepped into the breach and refused to issue a permit to any one but the Columbus Automobile Club for a race meet, after hearing the circumstances of the case. The driving association was led to believe that it could hold a race meeting on its own responsibility if the Columbus Automobile Club did not pay it the percentage demanded. The well known manager of a prominent racer assured the driving association that he could get a permit from the national body for \$16 "by a little scheming," and that he would obtain the best riders in the country to participate in this meet. The Columbus Automobile Club at once notified the American Automobile Association and asked that no permit be granted until it had heard from the club.

To our telegrams and letters a response immediately came, assuring us that our club would be protected and that no fear need be entertained on that score. As soon as the driving association discovered the position it was in it at once considered a half loaf better than no loaf at all and acceded to the wishes of the Columbus Automobile Club, under whose auspices the races will be given.

The case demonstrates the necessity of every club joining the American Automobile Association. That organization holds the same position in the automobile world as the National Trotting Association holds in the horse world, and it is a duty of every club to become a member of the parent club and join hands and heart in the upholding of sovereignty in the national organization. While the writer has not been authorized he is confident that he is voicing the sentiment of every member of the club in publicly expressing its appreciation of the promptness with which the American Automobile Association handled this matter and the dignified position it held in the matter.—C. A. HOWELL, secretary.

### LUBRICATING GEARS

Baltimore, Md.—Editor MOTOR AGE—How often should the gears in a sliding gear transmission be oiled and how much oil should be put into the case?—A. C.

The oil in the sliding gear transmission case should last for a run of at least 500 miles. Sufficient oil should be put into the case so that the teeth of the smallest gear will dip into it.

### LEAKY BOILER FLUES

Oconto, Wis.—Editor MOTOR AGE—We would like to know how to fix the flues of an automobile steam boiler without putting in a new set. We have handled a great many such boilers, but one now on hand is the worst we have ever seen. The flues at the fire pot end of the boiler keep steam tight even at 200 pounds pressure, but after the fire has been

shut off for about 20 minutes they begin to leak. We have expanded these flues with a standard roller flue expander and have been very careful not to expand them too much and thus weaken them; but the work was without avail. A taper drift was then made and used in the flues but they still leak. There are not any split flues. They have been carefully examined and the leak is around the outside, between the flues and the flue sheet.—L. C. Co.

The trouble may be due to the fact that the flue sheet is too thin. They should be at least 3-32 of an inch thick. If this is not the case, small thimbles or ferules of steel about 1/2 inch long should be put in the ends of the tubes and again expanded with the roller flue expander.

### COOLING MOTORS WITH OIL

Decatur, Mich.—Editor MOTOR AGE—What is the best rule or formula for computing the power of gasoline motors? Is it practical to obtain the brake horsepower of a motor without removing it from the car? Could not the method of cooling the cylinders with oil instead of water be applied to an automobile motor, the same as it is done in stationary gas and gasoline motors?—A. E. L.

The standard formula for computing the horsepower of a gasoline motor of the four-cycle type has been published several times. It is as follows:

Let D be the diameter of the cylinder in inches; S the stroke of the piston in inches, and N the number of revolutions of the motor per minute—Then, if H.P. be the required horsepower,

$$H. P. = \frac{D^2 \times S \times N}{18,000}$$

The brake horsepower of a motor may be obtained while the motor is in the car, but not with such accuracy as when tested alone, as allowance must be made for the friction losses of the transmission shaft or other gearing connected with the motor. The method of cooling the cylinder with oil instead of water is at present more or less of an experiment, even with stationary gas or gasoline motors, and its worth or lack of it has not been demonstrated in connection with automobile motors.

### DURYEA ON THREE CYLINDERS

Reading, Pa.—Editor MOTOR AGE—The reply to L. W. in a recent issue on the balancing of a three-cylinder motor seems to me incorrect. We have been building triple-cylinder motors for seven seasons and the proof of the pudding is in the eating. The fact that these motors run with almost no vibration indicates their splendid balance. The cranks being set at thirds causes the piston and connecting rods to balance, while the crank itself is in perfect balance. If two fly wheels are used, one at each end of the motor, overcomes much of the twisting strain present in any engine using a single fly wheel is overcome and this only argument against a triple-cylinder engine, in this respect at least, applies with greater force to a quadruple or sextuple arrangement. While it is sometimes assumed that a triple motor must have counter weights to balance the

cranks, no less authority than Unwin's Machine Design states that the cranks, connecting rods and pistons balance each other. This statement is further corroborated by Prof. Barr of Sibley College and other eminent authorities. Of course, while authority is good, the actual facts as found in practice are better. The following quotation from Motoring Illustrated, the English automobile paper, conveys our ideas of the triple cylinder engine nicely.

"The best type appears to be the three-cylinder engine, with the cylinders placed parallel, and the cranks set at an angle of 120 degrees apart. This gives regular impulses two-thirds of a revolution apart, and consequently even strain on the parts, and conduces towards absence of vibration. The three-cylinder engine, with its advantages of steady torque, light weight, and simplicity of design and manufacture seems to be as near the desideratum as it is possible to attain at the present time."—CHARLES E. DURYEA.

### FLY WHEEL AND MOTOR SPEED

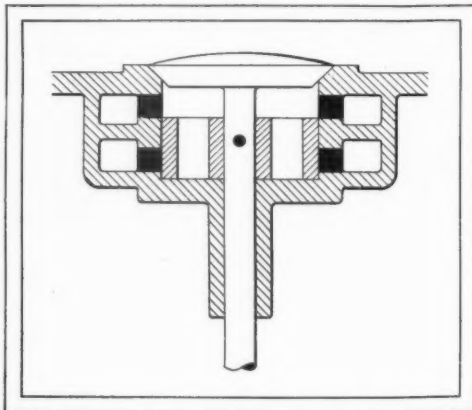
Milwaukee, Wis.—Editor MOTOR AGE—I have a 4 by 4-inch, opposed horizontal cylinder motor, which is supposed to develop a 10 horsepower at 1,200 revolutions per minute. I have never been able to get the motor to run over 600 revolutions per minute at the most. The valves are amply large, the compression good and the piston rings have a nice working fit. The fly wheel is 24 inches in diameter and weighs about 145 pounds. How can the motor speed be increased, and consequently the power?—D. L.

The fly wheel of the motor is altogether too large for a speed of 1,200 revolutions per minute. It should not be over 15 inches in diameter and the rim of the fly wheel should weigh about 50 pounds, if the motor is to run at this speed.

### COMBINATION MOTOR VALVES

Atlanta, Ga.—Editor MOTOR AGE—Is there such a thing in use as a combination motor valve serving to perform both the functions of the admission and exhaust valve and operated by a single valve and cam?—S. T. W.

Various attempts have been made to construct combination valves for gas and gasoline motors. The valve illustrated in Fig. 1 has an annular casing around its stem, and a short distance below the valve seat. Annular ports or openings are located around the valve chamber and are covered and uncovered by the action of the valve stem raising or lowering the annular casing, so as to allow the upper or lower ports to be in direct communication with the valve chamber. Upon the initial raising of the valve the upper ports are closed and the admission of the mixture of gasoline and air to the cylinder



MOTOR AGE

Combination Valves—Fig. 1

takes place through the lower ports. The valve then closes, the compression and explosion strokes take place and the valve again opens for the release of the exhaust from the cylinder, but this time only opening far enough to allow the escape of the burned gases without uncovering the lower ports.

Fig. 2 shows a form of piston valve in which two ports communicate with the combustion chamber of the motor and the other two form the admission and exhaust ports respectively. A downward movement of the piston uncovers the inlet port, putting the same in communication with the combustion chamber of the motor, while an upward movement of the piston uncovers the exhaust port and in a like manner puts the combustion chamber in communication with the exhaust opening. When in a central position, as shown, both ports are closed, thus cutting off all communication between the combustion chamber and the admission and exhaust ports during the compression and explosion strokes.

#### GASOLINE MOTOR PATTERNS

Denver, Col.—Editor MOTOR AGE—Which is the better pattern of gasoline motor to use for automobile purposes, the vertical or the horizontal? I understand that motors of the vertical pattern are freer from lubrication and ignition troubles than those of the horizontal pattern?—E. J.

This is largely a matter of choice. Each pattern has its own particular advantages and disadvantages. The vertical motor can be more easily lubricated than the horizontal, and the spark plays may be located in the top of the cylinder and thus be kept practically free from oil. On the other hand, the horizontal motor allows a lower center of gravity and does not cause as much vibration in the direction of the springs.

#### CONSTRUCTION OF SLIDING GEARS

Davenport, Ia.—Editor MOTOR AGE—Should the edges of the teeth of the gears in sliding gear transmission be rounded off or should the ends be notched or beveled? Is it advisable to have all the gears of steel and should they be case hardened?—C. H.

The best plan is to round off the ends of the teeth. The smaller gears or pinions should be of steel, but the larger ones meshing with them should be of phosphor bronze. The steel gears may be case-hardened if desired. Some makers case-harden the steel gears, while others do not.

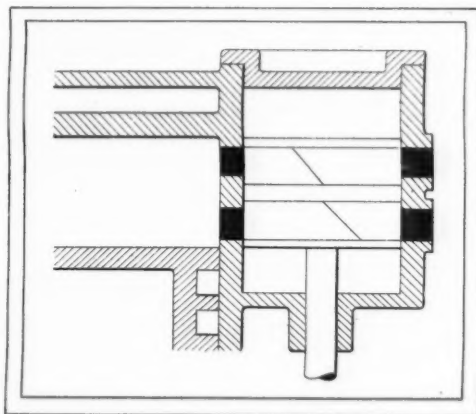
#### KEROSENE ON SPARK PLUG

Brooklyn, N. Y.—Editor MOTOR AGE—I had a peculiar experience with my gasoline car a short time ago, which may serve as a lesson to others. As the car had been standing for 2 or 3 days, the pistons and rings of the two-cylinder, vertical motor had become gummed and the motor was hard to start. A little kerosene was injected into each cylinder through the compression release cocks on the top of the cylinders and the motor turned over a few times to limber it. After the battery switch was turned on the motor refused to start and no adjusting or coaxing would induce it to do so. The spark plugs were taken out for inspection and a tiny drop of kerosene was found to be lodged between the points of both plugs. After this was removed no further trouble was experienced. The motor is fitted with a double, dash board spark gap, and

yet that proved futile as long as the kerosene was on the points of the sparking plug.

#### SKIPS IMPULSES REGULARLY

Chicago, Ill.—Editor MOTOR AGE—I have a four-cycle, single-cylinder motor of 5-inch bore and 6½-inch stroke which acts in a peculiar manner and if any members of the Readers' Clearing House can suggest a reason or remedy for the trouble I shall be glad to hear from them through MOTOR AGE. The motor is practically new, the piston and piston rings a perfect fit, the compression is good, the valves are in good shape and newly ground, but the motor will only fire every fourth revolution instead of every second. Every known



MOTOR AGE

Combination Valves—Fig. 2

form of coil, spark plug and battery have been tried, but without changing the state of affairs in the slightest degree. The inlet valve is suction operated and the exhaust valve properly timed, yet the motor will only fire every fourth revolution. The inlet valve opening is 1¼ inches in diameter and the exhaust valve opening 1½ inches. The carburetor is connected close to the inlet valve chamber. The spark plug is located in the top of the cylinder head, instead of between the valves in the valve chamber, as usual.—C. E. B.

#### GRAPHITE IN CYLINDERS

Jersey City, N. J.—Editor MOTOR AGE—We have been quite a little interested in a letter by Mr. Higdon, entitled, Plumbago for Lubrication, in MOTOR AGE of July 30. He says that "there is no doubt that graphite is a first-class lubricant for steam cylinders, also gas engine cylinders, if electrical ignition is not used, but as for using graphite in the crank chamber or cylinder of an electrically ignited engine—don't."

Now the writer has had three gasoline cars: An Autocar, an Elmore and a Long Distance, and in the cylinders of each one he successfully used graphite as a lubricant. With graphite there was less requirement for the large quantity of oil which was called for, especially in the Long Distance. At no time did he have the least trouble with the graphite short circuiting the spark plugs. The jump spark system was used in the Autocar and the Long Distance and a make and break spark was used in the Elmore. No trouble ever came up by the use of graphite.

If flake graphite is used—not too much—it will attach itself to the walls of the cylinder and to the bearing surface of the piston; it will fill up the inequalities of the bearing surfaces and less oil will be used and better results, the writer believes, will be assured than when oil alone is used.

The writer knows of graphite known to the trade as Dixon's No. 635 having been used with great advantage in the admission valve cup of the Winton machine. It stopped the noise of the valve almost entirely.

The same kind of graphite was used in another gasoline car and the owner considered that not only was the lubrication better, but said there was much less heating of the water.

Graphite may be introduced into the cylinder by placing a very small quantity in the crank case—not over a teaspoonful to each quart of oil used. When the engine is standing the graphite will settle in the oil, but while in motion, enough of the graphite is stirred up to show its usefulness later on.

For chains and bearings there is probably no lubricant so thoroughly useful as good, pure, flake graphite.—GEORGE E. LONG.

#### CHANGING TO JUMP SPARK

St. Paul, Minn.—Editor MOTOR AGE—Can I convert the primary make and break spark mechanism of my gasoline motor into a jump-spark system by setting the contact points apart the proper distance, and using a vibrator coil and commutator, without making any other changes?—C. S.

It is possible to accomplish this result in the manner described, but on account of the higher grade of insulation required for the secondary current it might not prove satisfactory. The better plan would be to have a new glands or bushings made to fit in the place of the ones used for the movable electrode and tapped to fit a standard spark plug.

#### BATTERY WITH LOW VOLTAGE

Columbus, O.—Editor MOTOR AGE—I have a two-cell storage battery which has a fiber case in one piece, forming the two cells. Repeated attempts at recharging the battery will not cause the two cells to show over 2.2 volts combined voltage. Can you suggest any reason for this low voltage and a remedy for it?—M. W.

There may be a crack in the partition which divides the two cells, this causing the battery to simply act as a single cell. The only remedy for this trouble would be a new cell or casing.

#### INCREASING MOTOR SPEED

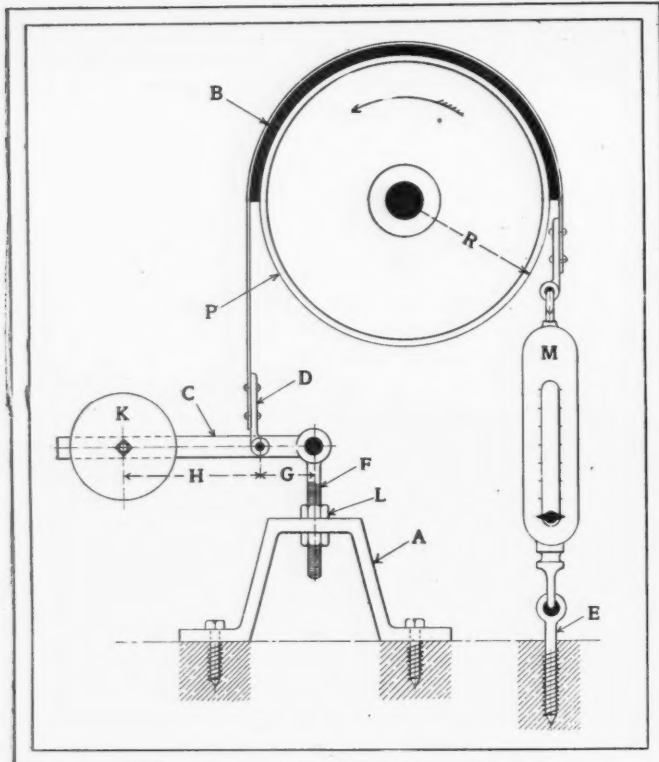
Seranton, Pa.—Editor MOTOR AGE—How can I increase the speed of a 4½ by 5½-inch motor? The inlet and exhaust valves are 1¼ inches in diameter and the compression about 65 pounds.—F. R.

The speed may be increased by increasing the diameter of the inlet and exhaust valve openings; also by increasing the voltage of the ignition apparatus to give a more quickly firing spark and consequently higher motor speed.

#### CAUSE OF POWER LOSS

Purvis, Miss.—Editor MOTOR AGE—As I see a good many inquiries regarding friction rollers, I wish to state that I am using a pressed rawhide friction roller, similar to one recently described in MOTOR AGE. It is of 1-inch face with a cast iron hub and runs against a copper disk. I find that it works very well. My gasoline motor miss-fires badly and will not pull the car at all. It is an opposed cylinder motor of 3¾-inch bore and 4-inch stroke. I have had the cylinders rebored and new piston rings fitted and new batteries, vibrator coil and float feed carburetor put in, but still the motor





MOTOR AGE

Construction of Prony Brake

does not work properly. It starts very easily, with one turn of the crank, but does not develop any power. What must I do to remedy this trouble?—J. W. W.

Loss of compression is probably the cause of the trouble. The new piston rings may not be a good fit, or the valves may need regrinding.

#### COMPARATIVE POWER

Buffalo, N. Y.—Editor MOTOR AGE—How much more power will a 6 by 6½-inch motor give than a 5 by 6-inch motor?—S. W.

With a piston velocity of 600 feet per minute a 6 by 6½-inch motor should develop 8.42 horsepower and a 5 by 6-inch motor at the same piston speed 5.89 horsepower, giving a difference of 2.53 horsepower in favor of the 6 by 6½-inch motor.

#### GASOLINE IN PETROLEUM

Chester, Pa.—Editor MOTOR AGE—What proportion of gasoline is obtainable from crude petroleum?—J. K.

The distillation of 100 gallons of crude petroleum yields 76 gallons of illuminating oil—kerosene—11 gallons of gasoline, 3 gallons of lubricating oil and 10 gallons of residue and loss.

#### MAKING PRONY BRAKE TEST

Canajoharie, N. Y.—Editor MOTOR AGE—How much picric acid should be used per gallon of gasoline? I am anxious to know, as I have the picric acid on hand. How can I ascertain the brake horsepower of a bicycle motor? I desire complete instructions for making a brake test.—W. N.

Gasoline will absorb about 5 per cent of its own weight of picric acid, which is equivalent to about 5 ounces of acid per gallon of gasoline.

The horsepower of a bicycle motor may be ascertained by the use of a Prony brake, but on account of the small amount of power developed by such a motor and the high rate of speed at which it is generally run, to develop its full power, a special form of Prony brake is necessary. It will be necessary, also,

to have the motor cooled by means of a fan, operated either by the motor itself or by some other source of power, in order to get accurate results, for the motor would be liable to overheat, otherwise, there being no natural draft.

The illustration shows a form of Prony brake well adapted to high speed motors. A semi-circular band of thin steel lined with leather or fiber, is bent to conform to the curvature of the motor driving pulley. If the motor is fitted with a chain sprocket this must be removed and a pulley temporarily substituted. The band is provided with lugs at each end so that one end of it may be fastened to a weight lever and the other to a small spring scale capable of weighing up to about 50 pounds. The motor should be firmly mounted on blocks on a bench and

at a sufficient height to allow the lower end of the scale to be secured to the bench.

The brake band B should firmly embrace the upper half of the pulley P, and be connected by the lugs D, at one end to the spring, scale M and at the other end to the weight lever C. The spring scale M should be attached to the bench by a screw eye E, while the weight lever C is carried by the eye bolt F, which has adjusting nuts L, and is supported by the bracket A.

The formula for this style of Prony brake is as follows:

Let M be the pull indicated by the spring scale in pounds; R the radius of the pulley in inches, and N the number of revolutions per minute of the pulley. Then if B, H, P be the actual brake horsepower,

$$B. H. P. = \left( \frac{M - 2H \times K}{G} \right) \times \frac{R \times N}{63,025}$$

The following is an example of the use of the formula: At 1,800 revolutions per minute the pull on the scale M is 30 pounds; the weight K is 2 pounds, and is 4 inches from the lug D, the distance G, being 2 inches; and the pulley is 4 inches in diameter. Then 30 pounds minus (2 multiplied by 4 and 2 and divided by 2) equals 22 pounds, the efficient pull on the brake band. Then 22 multiplied by 2 and by 1,800 equals 792,000. This divided by 63,025 gives 1.25 as the brake horsepower of the motor.

In making brake tests the motor should be tested at varying speeds, both above and below the normal speed, as in many cases a slower rate of speed with a heavier pull on the scale will show greater power, than a higher rate of speed with a lighter pull on the scale. By this means what is known as the critical speed of the motor, or the speed at which it gives its best results, may be readily ascertained.

#### BUSHINGS FOR PLUGS

Syracuse, N. Y.—Editor MOTOR AGE—I have a horizontal, opposed cylinder motor in which the spark plugs are located between the inlet and exhaust valves in the valve chamber. The spark plugs which were furnished originally

were made with a very short thread on the end, which screwed into the cylinder. I find that if I put a standard spark plug into the threaded opening and screw it down to a gas tight fit the exhaust valve strikes it. As the firm who made the original spark plugs has gone out of existence, I am at a loss what to do to remedy this trouble.—J. B.

Bushings can be made of hexagon steel, 1¼ inches across the flats, turned off and threaded on one end to fit the holes in the valve chamber and counterbored and threaded in the hexagon portion to fit a standard plug.

#### SIZE OF RELIEF EXHAUST PORT

Denver, Col.—Editor MOTOR AGE—I am thinking of building a single-cylinder motor. Is there any advantage in having a relief or auxiliary exhaust port at the end of the stroke? What should be the size of the auxiliary port?—F. W.

The advantage to be gained from the use of an auxiliary exhaust port is the reduction in both pressure and temperature at the end of the explosion stroke. The port should have a width equal to about one-eighth of the piston stroke and a length of about one-third the circumference of the cylinder.

#### REMEDIES ONE MISTAKE WITH ANOTHER

Chicago, Ill.—Editor MOTOR AGE—Many of the troubles of users of gasoline automobiles are due to ignorance. At least, most of mine were, and I know a whole lot of other people in the same fix.

The first thing that happened to my car was the burning off of the insulation of one of the secondary wires, caused by its being too close to the exhaust pipe. This was remedied by lengthening the wire and carrying it around to the other side of the frame and back to the coil, in order to avoid close proximity to the exhaust pipe.

Then the motor, which was of the horizontal opposed cylinder pattern, commenced to mis-fire in one cylinder. It would fire perfectly at slow speed with the ignition retarded, but with the ignition advanced one cylinder would fire only about every third or fourth time. After a lot of inspection and testing the mis-firing was found to be in the cylinder on which the change had been made in the secondary winding. Testing with the coil and battery showed the wiring to be all right and all connections in good shape, but still this particular cylinder refused to fire properly. Both cylinders were fired by a single vibrator coil and upon turning the motor over by hand, it was noticed that the vibrator of the coil, when the contact maker was on one segment gave a different sound than when on the other, producing a high pitched note on one and a much feebler tone on the other contact. The secondary circuits of each cylinder were tested with an ampere meter and a small storage battery. The secondary wiring which had not been changed gave a reading on the ampere meter of 15 amperes, while the wiring which had been changed and lengthened out showed only 6½ amperes. The original secondary wiring had consisted of No. 10 Okonite extra heavy insulated wire, while the wire which had been used in making the change was only No. 18. A simple twisted connection had been made between the new and the old wires. A single length of No. 8 wire was substituted for the previous "patched-up" job and the mis-firing ceased.—L. G. A.



# IN THE FIELD OF AUTOMOBILE DEVELOPEMENT

## THE FREDONIA TONNEAU CAR

The gasoline car which the Fredonia Mfg. Co., of Youngstown, O., introduced at last winter's New York and Chicago shows was a single seat rig somewhat larger, heavier and more powerful than the ordinary runabout and possessing many of the qualities of the light touring car. It was later found that a car of substantially the same construction, but with longer wheel base and different body, could be put out at but a moderate increase in cost, as a regular four or five-passenger tonneau car. This has been done, and during the summer the company has been especially pushing, both commercially and in manufacture, the Fredonia of the pattern shown in the illustrations.

The running gear of the car comprises the almost standard rectangular main frame mounted upon four full elliptical springs. The frame is of 3-inch channel steel, being a continuous length bent to shape and spliced in front. The springs are 30 inches long,  $1\frac{1}{2}$  inches wide and of five leaves. Cross bars of flat steel support the motor and transmission gear group. The wheels are wood, of the artillery pattern, 30 inches in diameter and fitted with  $3\frac{1}{2}$ -inch clincher tires. Both front and rear wheels run on roller bearings. The wheel base is 7 feet, while the tread is 4 feet 6 inches. The front axle is of  $1\frac{1}{4}$ -inch solid square steel. The rear axle is live, but not divided, being a continuous bar of  $1\frac{1}{2}$ -inch steel with a sleeve for the drive on one side and the corresponding section of the differential gear. The roller end bearings are carried by the spring blocks. Distance or radius rods of the common twin-buckle form are used to maintain the rear axle in its correct position and to adjust the chain. Wheel steering of the worm and gear style is employed in connection with jaw steering knuckles.

In the single cylinder, horizontal motor lies one of the peculiar advantages of the Fredonia; for while in general design it is entirely conventional it is the possessor of one feature which is not a characteristic of other cars. This is an auxiliary or relief port in the motor cylinder, provided for the purpose of assisting the exhaust of the burned gases. It is so situated that it is uncovered by the piston at the end of the outward stroke. It is said that were the motor not so equipped the terminal

pressure when the motor runs under a heavy load would be from 30 to 60 pounds, with a temperature of from 500 to 900 degrees Fahrenheit. The action of the relief port is to reduce this terminal pressure considerably—almost to atmospheric pressure—and thereby, also, to reduce the temperature. The effect of the reduction of the temperature is to prolong the life of the valves, lower the temperature of the cylinder and consequently that of the water jacket and of the whole cooling system, and to tend to prevent decomposition of the lubricating oil and the attendant features of low efficiency and disagreeable odor of exhaust.

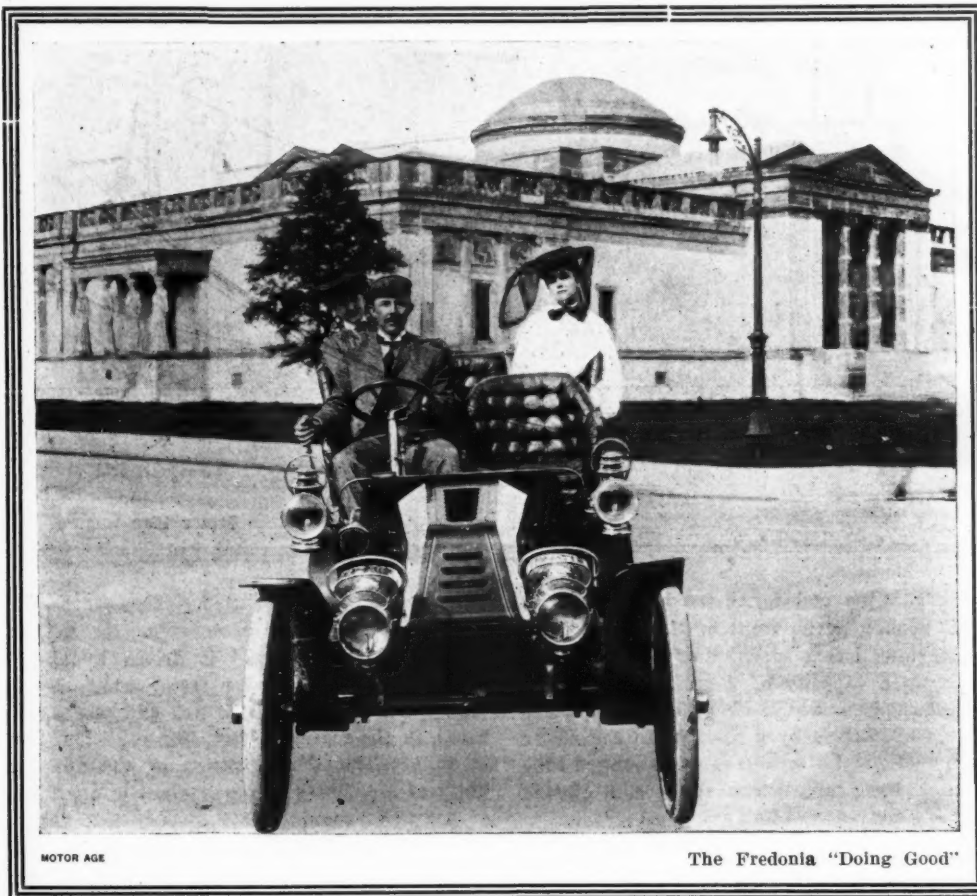
The motor is said to develop 11-horsepower at 750 revolutions per minute. The bore and stroke are 6 and  $6\frac{1}{2}$  inches respectively. The cylinder head and valve chambers comprise a

single casting. The inlet valve is atmospherically operated and is directly behind and in line with the exhaust valve. The crank case is of aluminum. The fly wheel carried is 24 inches in diameter and weighs about 180 pounds. All bearings in the motor have bronze bushings and are adjustable for wear.

The fuel is supplied by a float feed carburetor of usual construction, with the exception that the air inlet, instead of being open, is constituted by a 12-inch tube closed at the outer end and with its wall pierced with a multiplicity of saw slots. Causing the air to enter through these slots is said to prevent the noise sometimes consequent to the direct drawing-in of the air through a straight opening. The carburetor is not provided with means for changing the density of the mixture from the driver's seat while the car is running, it being assumed that this adjustment is to be made and set. There is, however, a general throttle controlling the amount of mixture taken into the combustion chamber. This is controlled by a right foot pedal.

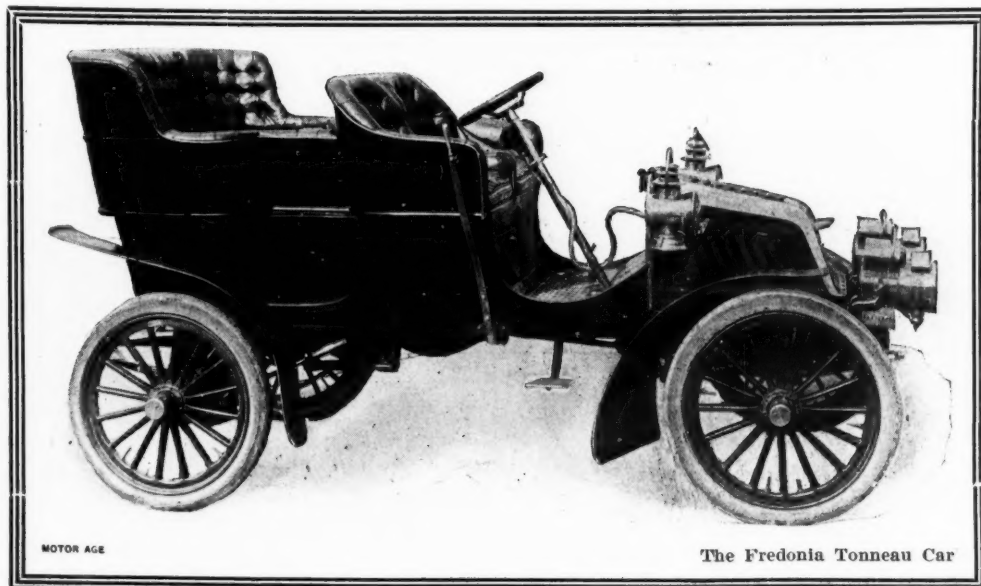
The ignition is by the usual jump spark system with vibrator coil and dry batteries. Two sets of batteries are carried, either of which may be switched into service. The ignition control is effected by a conventional spark lead, there being no automatic governor. The spark control lever is on the right side of the driver's seat. It is averred that by controlling the speed of the motor by means of both the throttle and spark advancer, according to the exigencies of the case, the great flexibility of running at speeds of from seventy-five to 750 revolutions per minute may be obtained.

Lubrication of the motor is effected by two gravity, sight feed oil cups, one on the cylinder and the other supplying the crankcase. There are also two compression grease cups on the crank shaft bearings.



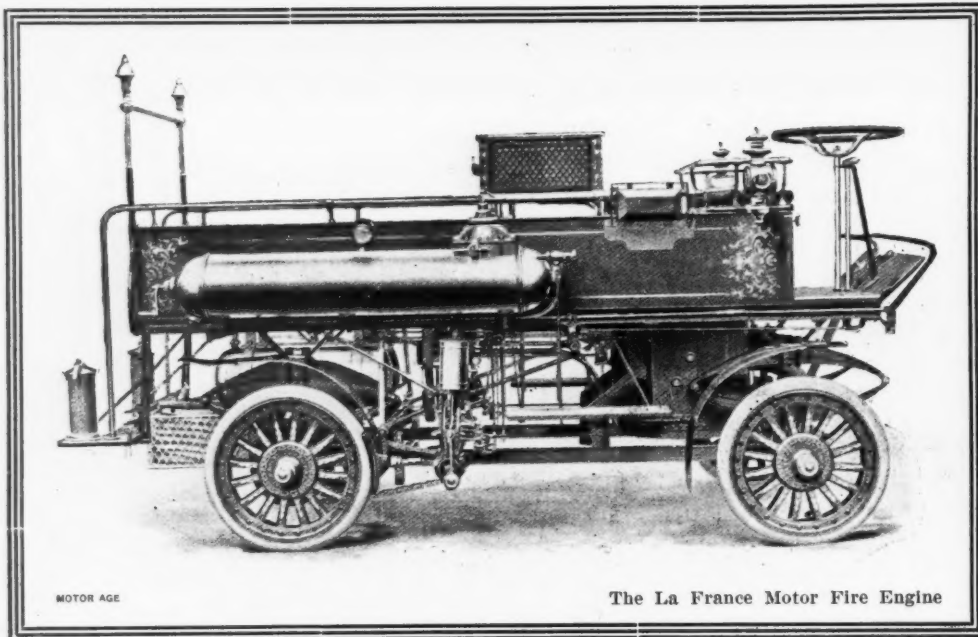
MOTOR AGE

The Fredonia "Doing Good"



MOTOR AGE

The Fredonia Tonneau Car



The La France Motor Fire Engine

The gasoline and water tanks are under a metal bonnet at the front of the frame. The former tank has a capacity of 9 gallons and the latter a capacity of 3 gallons. The cooling system is conventional, comprising a force feed pump, driven by a chain from the motor crank shaft, and a continuous coil, flanged tube radiator hung under the front end of the main frame.

Two speeds forward and a reverse drive are provided by a planetary gear transmission set placed at the right side of the motor and in line with its shaft. The reverse and low speed drives of this are controlled by brake bands in the customary manner, while the high speed drive is secured through a flat disk clutch. There is no internal gear, all of the changes being made through spur gears. The whole set is encased and runs in a bath of oil. The main side lever controls the fast and low speed drives, while the reverse is obtained through the action of a pedal.

The final drive is taken from a sprocket between the motor and transmission gear, by means of  $\frac{1}{2}$ -inch,  $1\frac{1}{4}$ -inch-pitch roller chain to the differential gear sprocket on the rear axle. There is a double acting drum band brake on each rear wheel hub and these two brakes are controlled by a pedal.

The body is the conventional tonneau. Its chief peculiarity is the method of division of the rear seats from their supporting box, whereby either may be swung upward and outward to expose the mechanism underneath. The entire mechanism of the car is made accessible by thus tilting the rear seats and lifting out the forward foot board. The front seat is divided. The seats are wide and deep and all of the upholstery is heavy. There is a folding seat on the tonneau door.

Edmond F. Dodge, who as Chicago agent displays the car at 1303 Michigan avenue, Chicago, is enthusiastic over the running qualities of the car and says that one machine, which throughout the summer has been kept busy with demonstrating and in country runs, has stood up beyond his expectations in consideration of the rough usage and lack of customary attention and care.

#### DURYEA ADAPTABILITY

The illustration herewith of the rather queer automobile shows a special Duryea carriage which the Duryea Power Co., of Reading, Pa.,

recently shipped to Japan. The car is intended to carry six passengers. It weighs about 1,000 pounds and is driven by a 12-horsepower, triple-cylinder motor which is of the regular Duryea construction and placed, as usual, in the rear. In fact, this particular car is an excellent demonstration of the adaptability of Mr. Duryea's power plant to any kind of body and running gear construction. It is only necessary that the motor, transmission and controlling mechanism group be arranged per schedule under the driver's seat—then the rest of the car may be built to suit.

#### LA FRANCE STEAM FIRE ENGINE

The La France automobile combination chemical fire engine and hose wagon is on exhibition this week at the engine house at the corner of Michigan avenue and Washington street, Chicago. This engine is manufactured by the International Fire Engine Co., at the works of the La France Fire Engine Co., Elmira, N. Y., with general offices at 149 Broadway, New York.

The price of the machine is \$5,000, but the company claims that its use is more economical than that of the ordinary fire engine drawn by horses. While the initial expense is larger it does away with the expense of horses, feed, shoeing, harness and harness repairs, stable supplies, veterinary surgeons, stalls and incidental expenses due to the care of horses. Another saving is in the con-

struction of fire houses, as they could be made smaller, or the same floor area now used could be made to accommodate more apparatus.

The general advantages claimed are greater speed, quicker starting and that the engine is always under perfect control. The speed can be maintained on long runs and better time can be made through crowded streets as the car is shorter by the length of the horse pole.

The motive power is steam. The engine is of 24 horse power. A water supply of 40 gallons is carried. While in the engine house gas is used as fuel and on the streets, gasoline. A speed of 15 miles an hour is claimed and 10 miles can be run on one water supply. One charge of gasoline will last for 60 miles. The engine weighs about 8,000 pounds, is 14 feet long and 6 feet wide over all. The gauge is 56 inches and the total height 90 inches. Solid rubber tires are used.

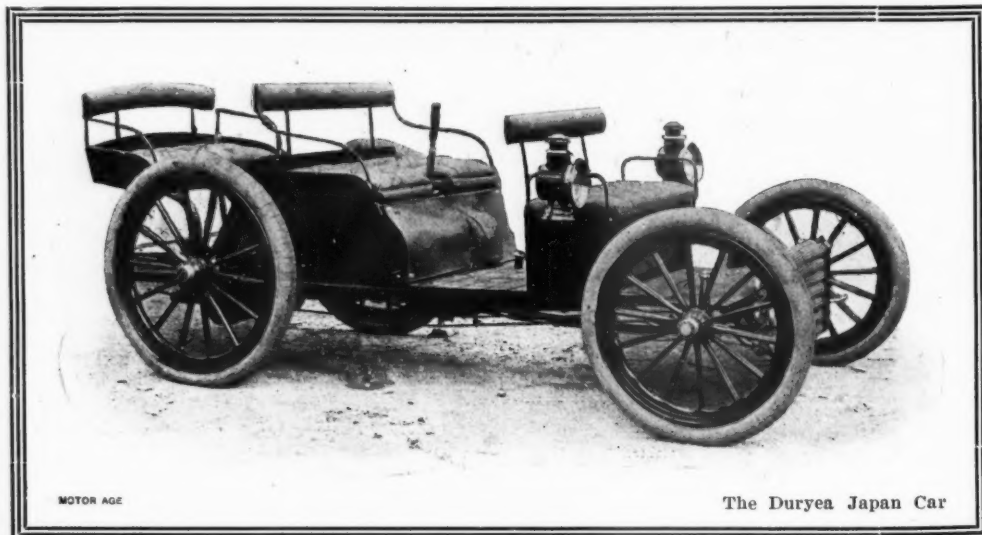
The equipment consists of a chemical fire engine with double 35-gallon cylinders and attachments. The hose body has a capacity of 1,000 feet of  $2\frac{1}{2}$ -inch hose. There are two Babcock fire extinguishers, ladders, fire axes, pike poles, crow bar, electric wire cutter, metal roof cutter and other appliances.

The engine has been tested in several cities this year, but the first to be purchased and put into actual use will be at New London, Conn., next week. About eight engines have been completed at the factory, and these will be shipped to purchasers over the country in a short time.

#### DAIMLER BUS DEMONSTRATES POWER

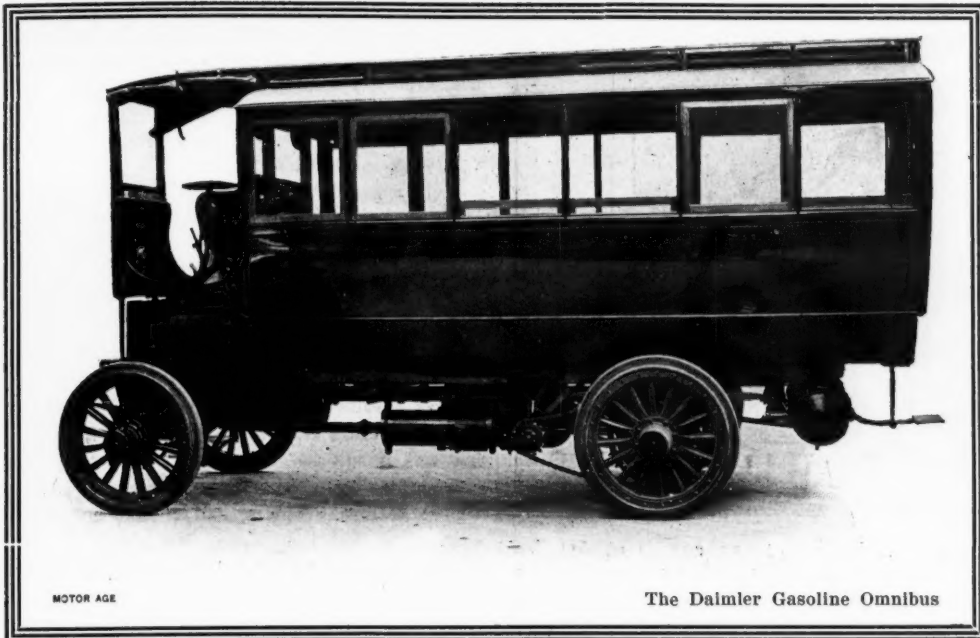
New York, Aug. 24—A Daimler bus, carrying twenty-one passengers made two notable trial climbs in this city last week. One of them was in a 9.75-per cent grade on One Hundredth street, from Third to Lexington, and the other on a 12.5-per cent grade on Lexington avenue from One Hundredth and Second to One Hundredth and Third street. Both grades were certified to by the city surveyor and the climbs attested by an affidavit signed by all the passengers. The bus in question is one built for a San Francisco company to connect two trolley lines.

The chains of the bus is of regular Daimler construction, while the body is typical of modern motor coach design. It is driven by a flexible, throttle controlled, Daimler, four-cylinder motor developing 20-horsepower. The transmission is the standard Daimler sliding gear furnishing four forward speeds and



The Duryea Japan Car





The Daimler Gasoline Omnibus

a reverse drive. The bus was built by the Daimler Mfg. Co., of Long Island City, N. Y., and it is the intention to continue the production of such cars.

#### VALUABLE FOR ELECTRIC CAR USERS

The Exide battery instruction book issued by the Electric Storage Battery Co., of Philadelphia, Pa., is certainly one of the most exhaustive treatises of the kind ever published, and should be of great practical value to the electric automobile user whose car is fitted with the Exide batteries. The booklet goes into every detail in connection with the care and use of the batteries, and this in a manner which can be readily understood by the layman who does not pretend to be greatly versed in terms electrical.

It starts with a description of all the battery parts, explaining their construction and purpose and relation to the other parts. Then follows directions for installing an assembled battery in an electric carriage. Next is a description of the arrangement of the switchboard and charging connections. Charging the battery and various important considerations in different methods of charging follow, and then are given general rules for the proper care of the battery under varying conditions. All of the elements of the battery are illustrated severally and assembled.

#### LATE SPARK FIXTURE

The illustration shows a little device which was originated and which has been introduced commercially by D. J. Mead, 1021 Ottawa street, Lansing, Mich. It is intended especially for Oldsmobiles and its purpose is to insure a late spark when starting, that there may be no accidental back-kicking of the motor. It is fitted to the starting shaft and connected to the spark lead lever. The attachment is readily accomplished and does not interfere in any way with the regular action of the spark control lever. As shown in the illustration the eccentric rod is provided with an adjustable stop.

#### THE SOOT-PROOF PLUG

One of the spark plugs which is attracting more than ordinary attention is that made by C. A. Mezger, 203 West Eightieth street, New York. It is known as the soot-proof and has been adopted by several prominent automobile

manufacturers as part of the regular equipment of their cars.

The plug is strongly made and the porcelain being in the form of a single large tube of which the inner end, exposed to the hot gases, forms a tapering shell, the chances of breakage are slight. The center of the spindle and wire are made of one piece of metal steel, the spindle being turned down to the size of a wire at the end that projects into the cylinder. The maker claims that his plug will require no cleaning and will not short circuit from soot deposit and that the insulator is designed to prevent cracking of breaking down of the insulation.

#### WANTS HIS PATENT RETURNED

A very interesting question came up for decision in the United States patent office, at Washington, this week when John J. Hogan petitioned that a certain assignment in the custody of the office be sent to him. It appears that the assignment in question is signed by the petitioner, transferring an invention made by him to the American Motor Vehicle Mfg. Co., and it was filed in the patent office for record by one C. J. Powers. The fee for recording the instrument was not paid, and several letters written to Powers in regard to the matter were returned undelivered. The instrument has now been in the custody of the office for more than a year. Hogan filed an affidavit that the American Motor Vehicle Mfg. Co. was never incorporated and that Powers had left for parts unknown and could not be found after diligent search. Since there are no officers of the company to

whom the instrument can be returned, Hogan wants it sent to him.

In denying the petition, the commissioner held that the office should follow the uniform rule of not returning an assignment filed to any one save the person filing it or the beneficiary of the instrument. It may depart from this rule upon the advice of a court of competent jurisdiction, but has no jurisdiction to investigate and determine the rights of the parties except as shown in the instrument itself.

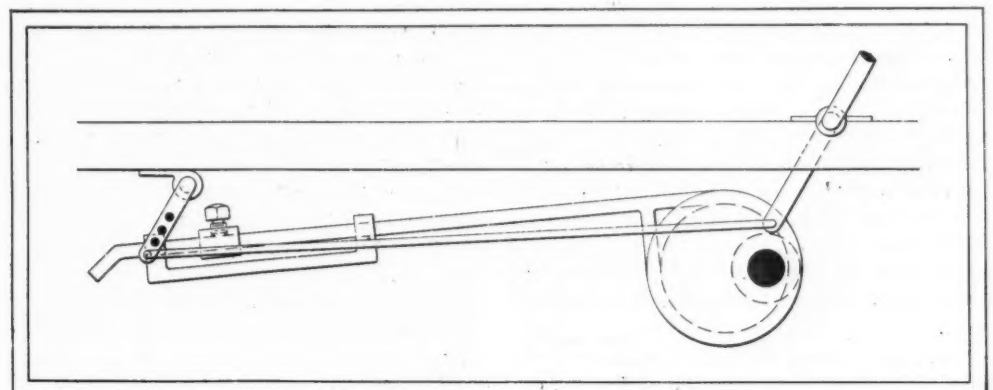
#### ONE MORE BIG CAPITAL GARAGE

Washington, D. C., Aug. 22—The business at 400 Fourteenth street, conducted by A. L. Kull & Co., has been incorporated under the name of the Willard Automobile Station, the incorporators being Louis P. Hall, A. L. Kull and Edward F. Colladay. The new concern will conduct a general automobile business, including selling, storing and repairing vehicles. The capital stock is \$25,000, divided into 250 shares of \$100 each. Immediately after the incorporation papers were filed, the following officers were elected: Charles Jacobsen, president; Louis P. Hall, vice president; Albert L. Kull, secretary and treasurer. These officers, together with Eugene Cochran and Henry Hammand, will constitute the board of directors for the first year. In consideration of 100 shares of stock, A. L. Kull & Co., have given a bill of sale of the chattels in the old station to the corporation. The Willard Automobile Station is located in the very heart of Washington and starts on its new career with every assurance of success. In the sales department the St. Louis car will be featured.

Professor Hubert von Herkomer, a painter, has presented a \$2,500 trophy to the Bavarian Automobile Club for international competition, not for speed, but for the best tourist cars adapted to general work, mountain climbing, excellence of brakes and baggage capacity. One of the points of the award will be the consideration and courtesy shown by drivers to the non-motoring public.

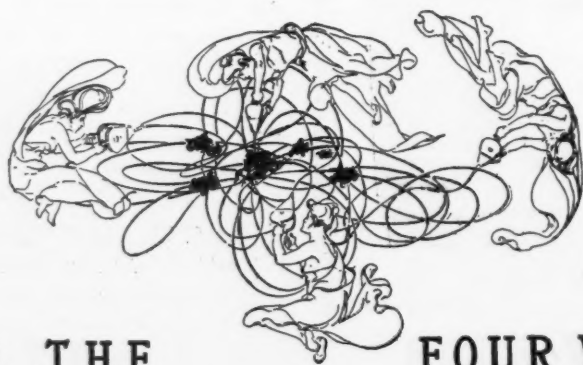
Earl Fisher, of Indianapolis, Ind., has left the Fisher Automobile Co. of that city, and has started in business for himself. He will do all kinds of expert automobile repairing and will carry a full line of tires, spark plugs and accessories. His new location is at 23 East Ohio street.

The Searchmont Automobile Co., of Philadelphia, Pa., very modestly hands out a little booklet telling "What Others Say" about the Searchmont. The "others" say pretty nice things, and Manager Gash is wise in letting the public know all about it.



MOTOR AGE

Mead's Late Spark Device



## FROM THE FOUR WINDS

### MOTOR FEVER STRIKES INDIANS

Billings, Mont., Aug. 22—Maurice Wolf, traveling representative of A. F. Chase & Co., Minneapolis, Minn., has been here, and now there is tumult in the camp of the Crow Indians, like unto that which stirred the small boy of the paleface when bicycles were at the height of their popularity.

Before the coming of Wolf there was peace and contentment in the tepee of the red man, but when he rode into camp in an Oldsmobile and showed it to Big Mouth, the chief, the latter was seized with a desire to become the possessor of the white man's devil machine. The principal obstacle in the way was that it would necessitate the disposing of 30 ponies in order to raise the price, and to do this the chief was reluctant.

Big Mouth was given a ride around the reservation, during which he found many things that did not suit his fastidious eye, but to nearly all of them Mr. Wolf had a ready answer. Big Mouth insisted that the machine should take a drink from the river when they were fording it. He thought the engine should drink Montana water as well as imported water that came in cans. With the assistance of a passing army officer the chief was finally satisfied.

Big Mouth declined to purchase the car unless it was painted a brilliant red, and to this Mr. Wolf finally agreed, so it only remains for the chief to corral the necessary number of ponies and the trade will be made.

### HENRI THINKS BARNEY BLUFFS

Henri Fournier has been questioned by le Monde Sportif, of Paris, on the subject of the challenge issued to him by Barney Oldfield in the course of an interview with the American crack by a New York Herald reporter. Fournier has slightly misunderstood Oldfield's offer, which was to allow him \$3,000 expenses to cross the ocean and not to race him for that sum. The inference from what Oldfield is quoted as saying was that this \$3,000 was to be irrespective of a stake or share of gate receipts to be agreed upon later.

Fournier, to translate his words freely and in part, says: "I have been inclined to think that the 'defi' of the American chauffeur is no more serious than those which we have received from time to time. It is a bluff, nothing but a bluff. There is nothing more than this to it."

"Barney Oldfield desires to measure speed with me and promises a match of 5 miles for a prize of 15,000 francs, if I consent to cross

the ocean. But what can a race of 5 miles prove? Nothing, absolutely nothing. I would say to M. Oldfield that if he possesses such an extraordinary machine as has been said, why does he not come over and take part in our annual contests? My answer, though, will probably not terminate the bluff of these Americans, which it is time to stop.

"Now this is what I propose to M. Oldfield: I have already decided to cross the ocean. I have no need to be offered money to do so, and I do not have to have 15,000 francs inducement. I want a square and equal race over a distance calculated to demonstrate the qualities of a vehicle and a driver. If he is so sure of his engine, I hold myself entirely at his disposal for a race not less than 100 miles, on a track or on a road. I do not ask for longer. The stake shall be 50,000 francs a side. One word from the American chauffeur and we will arrange this little affair. This will give me a chance to make a tour of America.

"I have no hope, however, that M. Barney Oldfield will answer this time. The Yankee chauffeurs are very free in launching 'defies' which they know are impossible of acceptance, but they take care not to propose anything which will be reasonable."

Fournier is a good fellow and popular in this country. The French crack, though, is a bit of a bluffer himself, on occasion.

### WHO WILL BE FIRST?

With two transcontinental trips completed, the third an almost assured success, with the Arctic circle having been crossed, with England having been ridden from end to end and with cars having been run into all conceivable corners of the earth and made to do all manner of peculiar and picturesque "stunts," the question naturally arises "What next?"

The answer is easy and almost as naturally given—a trip around the earth.

This was tried once, but the navigators of the "Passe Partout" were unfortunate and managed among other things to work on a schedule which landed them in Siberia in the middle of winter. The result was that the car had to be dug out of the ice to be saved at all.

So, for glory or for advertising, the rational successor of the transcontinental trip is the circling of the globe. The task is open to him who will.

It is a hard one. Each possible route through Asia presents difficulties which will task human ingenuity to surmount.

The Siberian route presents the natural difficulties of northern countries, while the East

Indian route compels traversing roadless sections of China.

It will be an expensive trip and can be made only by some amateur sportsman well provided with the medium of exchange or by some manufacturer who seeks surpassing advertising.

Yet, regardless of difficulties and expense, it is probable that no great time will elapse before the trip is ventured. It is also probable that it will be successful if attempted by the right kind of a man with the right kind of a car.

At least it should be successful, for it is the rule of such things that the first attempt always results in failure, just as the first attempt to cross the continent of North America was unsuccessful.

The first essay at automobile world-girdling was a failure. The second should be a success.

Who is ready to try it? The answer to this question is more of interest than that to the question of "Will it be done?" for sooner or later, by someone, it certainly will.

### THROUGH EASTERN STATES IN STEAMERS

Boston, Aug. 22—Mr. and Mrs. William Huston, of Columbus, O., arrived in this city yesterday, having come from their home in a Toledo steam car. They left Columbus June 18, and journeyed by way of Gettysburg, Baltimore, Washington, Philadelphia and New York. The return trip will be made through Albany, Syracuse, Buffalo, Niagara Falls and Cleveland. The car is fitted with a canopy top to keep off the sun, while a large rubber blanket is carried for use in sudden rain storms. But as Mr. and Mrs. Huston are not engaged in breaking records, they have not made it a practice to travel when it was raining. They have stopped and fished as often as the inclination struck them and have strapped to the side of the car a golf basket in which are kept fishing rods and an umbrella.

The car is a regular model, but has had an extra gasoline tank under the seat, increasing the capacity  $4\frac{1}{2}$  gallons. Mr. Huston is a retired carriage manufacturer and is thoroughly familiar with steam. He thinks that it is far superior to any of the other powers for a touring carriage and intends to have a large car built to his order next year. He has had the Toledo since April, 1902, and has ridden over 6,000 miles in it, his wife having



MOTOR AGE

Big Mouth Drives the Olds



been with him for more than 4,000 miles of the distance. His daughter is said to be the only lady in Columbus who runs any car but an electric, and also to have been the first lady there to run an automobile.

#### MOTORING MISCELLANY

The Automobile Club of Florence, Italy, is organizing a race from Florence to Viareggio.

A little kerosene oil on the cloths used in cleaning the engine greatly facilitates the removal of any grease.

The Lobee Pump & Machinery Co., of Buffalo, N. Y., has removed from 18 Elk street to 140 Terrace, corner of Erie street.

Charles H. Tucker, manager of the Chicago branch of the Winton Motor Carriage Co., is taking a short outing at Block Island, N. Y.

The annual Austrian hill climbing trial under the auspices of the Austrian Automobile Club will be held September 13 at Schottwein-Semmering.

The monument in memory of Marcel Renault will be erected at Billancourt near the Renault works, on a site granted by the local authorities.

In starting a motor it is well to remember that a few quick turns of the crank will do more to start the engine than 5 minutes of slow turning.

Denver, Col., claims to rank third in the number of automobiles in its corporate limits. It claims over 2,000, but admits Detroit and New York have more.

Some of the rural officials in England have suggested that motor cars be painted a dull or dark color, in order to lessen the danger of frightening horses.

Gere Worcester, of the Philippine commission, who recently returned from the orient, has purchased a Locomobile steam car which he will take with him when he returns to the Philippines.

A deflated tire should not be allowed to support the weight of a car. If it is not convenient to repair the tire at once, the weight of the car should be taken off it by a jack or other support.

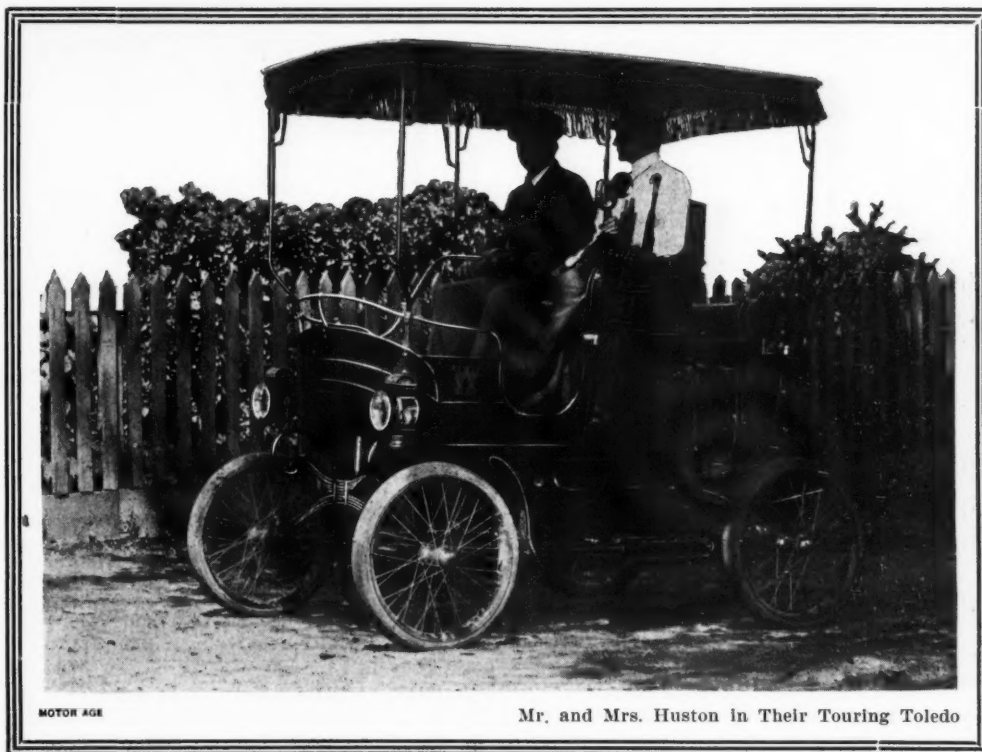
Cavanaugh & Darley, of Chicago, advertise Plati-neum as a substitute for platinum, iridium and all other metals used for sparking points in gas or gasoline engines. They claim it lasts three times as long as platinum.

George W. Bennett, sales manager for Thomas B. Jeffery & Co., of Kenosha, Wis., manufacturers of the Rambler cars, was on one of the trains wrecked on the C. M. & St. P. railway several days ago. He was uninjured, however.

The Lobee Pump & Machinery Co., of Buffalo, N. Y., issues a circular on circulations, which says that the best way to get a good circulation on an automobile, launch, gas or gasoline engine is to use the Lobee rotary circulating pump.

The Duryea Power Co., of Reading, Pa., sends out a folder showing why, in the opinion of the company, the Duryea motor vehicles are the simplest and handiest carriages in the world. The famous one-lever control is the chief topic of discussion.

Two motorists of La Crosse, Wis., recently started on a tour to Milwaukee. When about half way the car broke down, and the following telegram was sent to their friends at home,



Mr. and Mrs. Huston in Their Touring Toledo

marked collect: "Machine busted and so are we. Send us some money."

E. B. Martin, of Chicago, accompanied by his family, left last week for an extended tour with his Locomobile touring car. He goes first to New York, and then through Canada, after which he will probably tour through New England, returning to New York.

Charles B. Shanks, of the Winton Motor Carriage Co., of Cleveland, O., ran into something sharp while going through the factory a few days ago, and soon after a light case of blood poisoning developed, but his physician says there will be no serious trouble.

Dr. Truman J. Martin, of the Buffalo, N. Y., Automobile Club, has proposed that the club give a masquerade parade on the next run. It is planned to have the run to Niagara Falls, and the occupants of all the cars will be masked. The details of costume or decorations will be left to the ingenuity of the owners.

Premier Combes has sent a circular to prefects throughout France instructing them to annul all ordinances which limit the speed of automobiles unless they also apply to every other form of vehicle. This measure means that motor cars are to be treated exactly like carriages, cabs, carts and animal-drawn vehicles of every description.

The Grand Duke of Mecklenburg Schwerin has written to Motoring Illustrated, of London, England, saying that he has read with the "highest disgust" statements that he has offered to allow the Gordon Bennett race in 1904 to be held on his territory. He declares the statement is utterly false, and that the question of holding the contest in the duchy has not been considered.

The council of Surrey county, England, calls attention to the damage being done to British roads by the increasing use of motor vehicles. It claims that the action of the rubber tires sucks up the fine materials of the road, leaving the large stones to grind and wear. It suggests that owners of automobiles be required to pay a tax for road mending and that the roads be constructed of different and better material.

A German publication suggests that the Chinese wall be reconstructed as an automobile track and the Gordon Bennett cup races be held thereon. The drivers could be fed on chop sooy to keep them in a good humor.

A prominent English lawyer expresses the opinion that if a policeman in plain clothes boards a motor car, he may be legally thrown off of it. The motorist cannot know that the intruder is not going to commit an assault on property or person.

George Ketchum, owner of the famous race horse, Cresceus, has purchased a White touring car, which he says he will use as a pace-maker for his horse. It is presumed that Ketchum will sit in the back seat of the car and hold a measure of oats out to induce the horse to make more strenuous efforts. Heretofore a running horse has been used as pace-maker, but Mr. Ketchum believes that the automobile will afford a faster and steadier pace, not to mention the seductiveness of the oats.

The people of Terre Haute, Ind., are rapidly awakening to the utility of the motor car. Eighteen months ago there were three cars in the town, and whenever one went along the street, the natives would stop in their mad career of writing and reading historical novels and turn to watch the automobile until it disappeared around the corner. Now there are twenty-eight cars in the corporate limits of Terre Haute, and many of the residents who have not yet purchased expect to do so at the earliest opportunity.

A new occupation is opening for tramps in England. They station themselves near a police trap and warn approaching motorists of danger, and as a result are rewarded with donations of small pieces of money. One enterprising organ grinder displayed a large sign which read: "Kind friends, I am unable to work, through an accident," on one side, while on the other, which was turned away from passing policemen was this notice: "Warning! Motor car trap in site. Smallest contributions thankfully received." The motorists willingly paid the man, as they found that cheaper than paying a magistrate, and far more satisfactory.

# AMERICAN MOTOR LEAGUE OFFICIAL BULLETIN

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Edwin F. Brown.....Chicago  
Henry F. Spaulding.....Buffalo  
S. W. Merrihew.....New York  
Charles B. Shanks.....Cleveland

## NATIONAL COMMITTEES

### TECHNICS

Chas. E. Duryea.....Reading, Pa.  
Charles T. Jeffrey.....Kenosha, Wis.  
Ernst J. Berg.....Schenectady, N. Y.  
Alexander Winton.....Cleveland  
A. L. Riker.....Short Hills, N. J.  
Elmer Apperson.....Kokomo, Ind.  
Clark Slinz.....Grand Rapids, Mich.  
Julius W. Walters.....Jersey City

### RACING

A. G. Batchelder.....New York  
Albert Mott.....Baltimore  
Geo. G. Greenburg.....Chicago  
Chas. W. Mears.....Cleveland  
J. C. Kerrison.....Boston  
John N. Sharp.....Salt Lake City  
C. W. Carpenter.....San Francisco

## MEMBERSHIP

Frank A. Egan.....New York  
John Wilkinson.....Syracuse  
W. K. Cowan.....Los Angeles, Cal.  
John M. Clark.....Columbus, O.  
S. E. Gifford.....Chicago

## SIGN BOARDS

John B. Price.....Hazleton, Pa.  
Edw. W. Barnes.....Perth Amboy, N. J.  
E. W. Roberts.....Clyde, Ohio  
W. J. Morgan.....Newark, N. J.  
B. G. Campbell.....Milwaukee  
G. W. Poley.....Norristown, Pa.

## PRESS

Jos. Estoclet.....Philadelphia  
John C. Wetmore.....New York  
John J. Donovan.....Boston  
Louis R. Smith.....New York  
Arthur N. Jervis.....New York  
C. G. Sinsabough.....Chicago  
W. Horace Lerch.....Buffalo

## DANGER SIGNS

Our signboard committee will shortly adopt a series of designs for danger signals to be erected in localities where precarious conditions render the use of such signals advisable. These signs will be about nine in number and will respectively indicate the approach to a steep descent; to a railroad crossing; to a branch road to right; to a branch road to left; to cross roads; to a ditch or gully across the road; to a hummock, or "thank-you-ma'am" extending across the road; to a city, town or village, and the proximity of any other danger.

It is the purpose of the league to issue a large number of circulars showing the forms, dimensions and colors employed in the making of these signs and specification to be followed in case a local club, consul or consulate should elect to make and put up signs in any given locality. The league will also arrange to have the signs made of enameled sheet steel, in quantities, and supplied at cost price to all persons who will volunteer to put them up. The illustrated, descriptive circulars will be sent to all automobile clubs and to all A. M. L. members and will be widely distributed among the leading newspapers.

## RATES AT LEAGUE HOTELS

Some time ago it was announced that league hotels would be required to allow a discount to league members. This requirement has been abandoned. Our members, as a rule, are now exacting upon the subject of good fare and decent accommodation than upon a shaving of the customary rates. We aim to appoint only the very best houses in each locality, and the appointment will in every case be canceled if the official hotel fails to supply good meals, good service and clean, hospitable accommodation. Each hotel is under contract to treat our members well and to serve them properly.

The league received twenty-two applications for appointments as official hotels during July and August. Its officers are pleased to be-

## THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs, necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

## WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

stow this appointment in every case where the character of the house and the quality of its accommodations entitle it to be thus recognized. Outside of the larger cities a strictly good American plan hotel is not easily found. We are looking for them, and want the aid of every driver and owner of a motor car to help us in the search. All letters on this subject are confidential.

If the hotel you have in mind treats you badly, feeds you poorly or loads your bill with an overcharge, write to the secretary and give him the facts. If you find a really deserving, courteous host, with a clean, hospitable house, having comfortable beds, good food and fair service let us have the name and address. We compile and classify all this information, and some day you are likely to profit by a knowledge of the facts which another member contributes. If you have anything to write on the hotel subject, don't put it off till next week or next month; write it now.

## PETTY SWINDLERS

Have you run across the country supply man who takes advantage of your extremity and charges you two or three prices for, say, gasoline, or any other article or commodity necessary to your trip? These chaps are abroad in the land and as the league waxes stronger

we shall lend our efforts to the wholesome and agreeable task of driving them out of business. We have placed a black mark against the names of several of these, who will hereafter take their places among the "not recommended." Conditions will sometimes excuse an apparently substantial charge for supplies purchased at a distance from the wholesale depot, but these conditions are easily recognized in any given case and are, in most cases, exceptional. If you have reason to think you have been victimized by such trade sharps, let us have the facts in the case.

## CO-OPERATION

Let us hear from you. Just a line if not more. Say that you believe in the league and intend to help it work out its splendid destiny. These are the days when your help will be needed, and appreciated. We are receiving letters every day from automobilists who ask for information about the league and who are willing to join its ranks. There are thousands of others who would like this information, and who are willing to join, but haven't the time to write letters to the secretary. Some of them are friends of yours. Why not make them members at once? Let us hear from you.

## THE PIONEER CLASS

Members joining the league now are in the "pioneer class" and this distinction will be retained for members only until 5,000 are enrolled. The coming-in of clubs and consulates will fill the pioneer class with great dispatch and names added thereafter will be put on the general roll. In after years a place in the pioneer class will be greatly valued. If you are not a member, or if your friend at your elbow is not a member of the American Motor League, send your name and address with 1 year's dues—\$2—and subscription fee to MOTOR AGE for 1 year—\$1 to A. M. L. members only—to the secretary, whose name and address you will find at the head of this page.

If you are not a member of the American Motor League, send your name and address to R. L. Stillson, Secretary, 150 Nassau street, New York, and obtain printed information.

If you are not a member of the American Motor League, send your name and address to R. L. Stillson, Secretary, 150 Nassau street, New York, and obtain printed information.



# GET READY!

The busy manufacturer so often keeps in "the same old groove"—buys just where he has been trading for years. This is not doing his product justice.

Keen competition in modern merchandising, however, is "stirring up" those who are getting ready to improve their output for next season.

We're justly proud of the many new customers our good goods are bringing us.

Just think of the profit it means to you to use material that stands the hard service of the road better than the kind you've been using.

This certainly means marked economy—then why not let's quote you on Standard Seamless Tubing—the tubing that has made its mark in the tubing world—the Rim that stood true on that trans-continental trip? While on Front and Rear Forks, Stays, Fork Stems and Seat Posts, you'll get parts made from tube stock that has proved its worth by repeated tests.

Improve your product—we'll assist you—but you must write us.  
Our Samples are yours on request.



# THE PACKARD TRANS

Last week we gave the itinerary of "Old Pacific" from Omaha, Neb., to Batavia, N. Y. We herewith give the conclusion of the greatest test of endurance ever accomplished by a motor car:

<i>Left</i>	<i>Batavia, N. Y.,</i>	<i>August 18th</i>
<i>Arrived</i>	<i>Syracuse, "</i>	<i>" 18th</i>
<i>"</i>	<i>Herkimer, "</i>	<i>" 19th</i>
<i>"</i>	<i>Hudson, "</i>	<i>" 20th</i>
<i>"</i>	<i>New York City, "</i>	<i>" 21st</i>

At 5 o'clock, on the evening of June 20th, "Old Pacific" started on the first stage of 27 miles to Port Costa. Our schedule allowed thirty days in which to reach Denver, and on July 20th, on time to the minute, our Overland party rolled into this metropolis of the west.

The route followed will show that no obstacle or difficulty was avoided. In Utah, the world renowned Soldier's Canon could easily have been left fifty miles to the south, but by so doing "Old Pacific" would not now have the distinction of being the only Motor Car to ever traverse that gorge, through which even men on horseback carry their lives in their hands.

Had it been our wish to shirk any part of this heroic test, fully three hundred miles in distance and several thousand feet in elevation could have been avoided by following the northern route through Wyoming instead of descending diagonally across Utah and through central Colorado, at one time making a perfect U whose vertical sides and base were one hundred miles long.

We were after the most difficult way of accomplishing the greatest automobile test this country can produce—and we found it. Our standard single cylinder, 12 horse power Model F



OLD PACIFIC AFTER A MUD BATH NEAR ANITA, IOWA—F



FAIR SAMPLE OF IOWA ROADS—NEAR NEWTON, IOWA.



IOWA MUD AT WHICH OLD PACIFIC LAUGHED JUST AS SHE H



# 3-CONTINENTAL TRIP



A—REAR WHEELS SOLID DISKS OF MUD.

was equal to every emergency and by its own power brought its total loaded weight of 3,000 pounds over the two ranges of the Sierras, the deserts of Utah and Nevada, and the Rocky Mountains in just thirty days.

It was figured that the greater distance from Denver to New York could also be accomplished in the same elapsed time as had been consumed in the first part of the journey, but these calculations did not consider the awful road conditions encountered through Nebraska and Iowa. On July 30th, after spending the entire morning charging the enormous mudholes which extended from fence to fence, our party encountered one so broad and deep that "Old Pacific's" momentum was not sufficient to plunge it through. It was completely drowned, and Packard motors will not operate under water. For the first time since 'Frisco the motor refused to mote. It was necessary to be hauled out by a team. This was the only instance on the entire trip when the motor was unable to meet the emergency.

In spite of the delays due to impassable roads in Nebraska and Iowa, "Old Pacific" reached New York at 8:40 p. m., August 21st, or just 61¼ days since it left San Francisco. As it led its large automobile escort at a lively clip into New York City, it closed the greatest test of automobile endurance that nature could possibly provide.

The successful accomplishment of this overland journey by the most difficult route, avoided even by the commonest modes of travel, has placed the name PACKARD, for endurance and absolute reliability, upon the very highest pinnacle. Other names may be placed near it, perhaps even beside it, but there will never be any above.

*"Garcia" has the message.*



HE HAD DONE AT MOUNTAINS AND DESERTS.



IN THE MUD NEAR ANITA, IOWA—SHOWING FLEXIBILITY OF RUNNING GEAR AND SPRINGS.

# Exactly $1\frac{57}{100}$ Cents Per Mile

the actual  
tire cost of  
Tom Fetch's  
Trans-Conti-  
nental Trip on



A photo of "Old Pacific" taken when the car reached Cleveland on Aug. 14, for the purpose of showing the exact condition of the tires. Their condition was practically the same when New York was reached. The shoe laced over a rent in the front tire casing is to prevent bulging, but it has slipped partly out of place. The casing was torn by nails in the timber curbing of a street in an Illinois town.

"Old Pacific" reached New York on August 21 after 62 days on the road, of which 51 days were required to traverse the dreaded roads between San Francisco and Chicago, coming by direct route, west to east, regardless of the absence of roads and all other difficulties. The machine left San Francisco equipped with four Diamond Detachable Tires and carrying three extra Diamond Detachable Tires in reserve. **Every foot of the entire trip was made on this original equipment.** No additional tires of any make or kind were furnished, and while all of the three reserve tires were used, two of those discarded are in condition to be repaired and give further service. The tire history of the entire trip is therefore:—

THREE PUNCTURES { 1st Puncture, Lovelocks, Nev.  
2d Puncture, Florissant, Col.  
3d Puncture, Herkimer, N. Y.

THREE CASES REPLACED { 1st case discarded, Grand Junction, Colo.  
2d case discarded, Grand Junction, Colo.  
3d case discarded, Herkimer, N. Y.

**Every point of excellence which made these unprecedented results possible is now embodied in the manufacture of every Diamond Detachable Clincher Tire**

Value of case destroyed,	-	-	\$35.00
Cost of repairing two cases damaged, at \$10.00 each,	-	-	20.00
			<hr/> \$55.00

[Tubes have not been included as none were injured beyond possibility of easy and inexpensive repair with ordinary cement and patches.]

The distance covered (across the continent by the shortest and most difficult route), at this cost was 3,500 miles. The weight carried was 3,000 pounds. The average cost per mile including cost of tire destroyed and cost of repairs amounts to

## EXACTLY $1\frac{57}{100}$ CENTS PER MILE



# DIAMONDS The Most Economical as well as The Best American Clincher



A photo of the other side of "Old Pacific," taken at Cleveland when the car reached there on Aug. 14, for the purpose of showing the exact condition of the tires at that time, which was practically their condition when New York was reached.

That the experience of Mr. Fetch with Diamond Tires was not merely an instance of good luck is amply shown by the record now being made by Messrs. Whitman and Hammond who are crossing the continent in an automobile which is also equipped with Diamond Tires. Writing from Denver, 30 days after leaving San Francisco, Mr. Whitman said:

"We had our first puncture at Rock Springs—a nail in our rear tire. The other three tires have not even been pumped since leaving San Francisco."

These are Honest Records.  
They are Diamond Records.

Diamond Records are Always Honest.  
Diamond Advertisements are Always Honest.

Diamond Tires are Always Honest.

Honestly made, honestly advertised and sold without misrepresentation

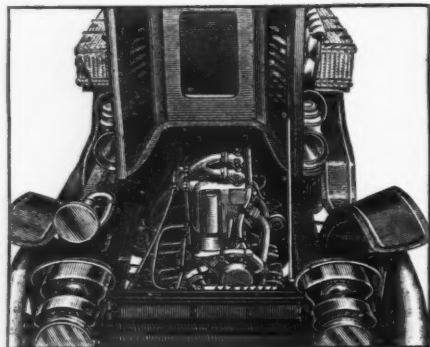
The Diamond is the Best American Clincher Tire.

## The Diamond Rubber Co., Akron, Ohio.

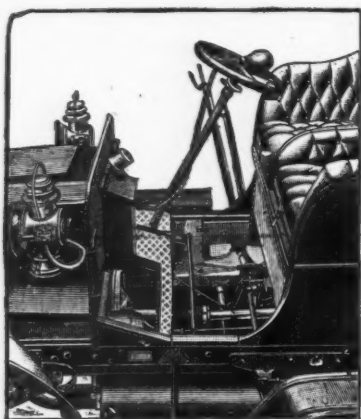
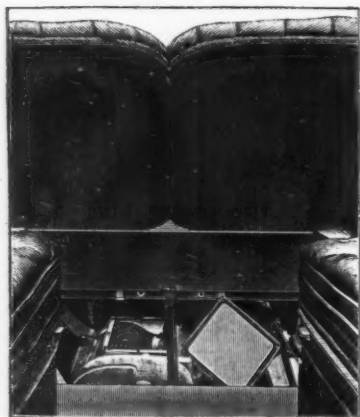
# THE ACCESSIBILITY

## OF THE

# Searchmont



SEARCHMONT MOTOR.

SEARCHMONT CLUTCH AND  
CLUTCH SHAFT.

SEARCHMONT TRANSMISSION

The **Searchmont** is not only built upon the right design, but its important working parts are all easy to get at, so that any adjustment can be made without lying on your back or standing on your head, or taking the car to pieces.

You get at the carbureter, the commutator, the governor, the valves--in fact everything pertaining to the motor--by simply raising the hood in front.

You get at the clutch and fly-wheel, the dynamo and countershaft, by raising the trap door in the floor underneath the driver's feet.

You get at the transmission by raising a trap door in the tonneau.

You stand on your feet and keep your head when you look at any part of the **Searchmont**

**"America's Leading Automobile."**

### SEARCHMONT AUTOMOBILE CO.

MEMBER OF THE ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS.

North American Building, PHILADELPHIA.

Factories: Searchmont (near Chester), Pa.





# Marvelous, Indeed!

Again the genuine detachable G. & J. Tires demonstrate they are the fastest and most reliable automobile tires in the world.

At Columbus, Ohio, July 4th, Barney Oldfield broke all existing records from one to ten miles, establishing a new table of world's records as follows: . . . . .

## OLDFIELD'S RECORD AT COLUMBUS, OHIO, JULY 4, 1903

1st mile . . .	56 2-5	One Mile . . .	:56 2-5
2nd " . . .	59	Two Miles . . .	1:55 2-5
3rd " . . .	59 3-5	Three Miles . . .	2:55
4th " . . .	1:00	Four Miles . . .	3:55
5th " . . .	59 3-5	Five Miles . . .	4:54 3-5
6th " . . .	59 3-5	Six Miles . . .	5:54 1-5
7th " . . .	1:01	Seven Miles . . .	6:55 1-5
8th " . . .	1:00	Eight Miles . . .	7:55 1-5
9th " . . .	59 3-5	Nine Miles . . .	8:54 4-5
10th " . . .	1:00	Ten Miles . . .	9:54 4-5
<b>TOTAL . . .</b>	<b>9:54 4-5</b>	<b>Mile Average . . .</b>	<b>:59 4-5</b>

INSIST ON

# G & J TIRES

being fitted on your automobile.

They will be furnished by manufacturers and dealers everywhere.

## G & J TIRE CO.

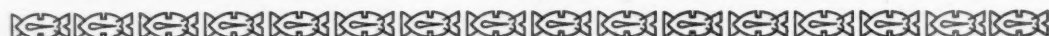
INDIANAPOLIS, IND.

NEW YORK AGENCY, 81 Reade Street, New York City.

# NOTICE

TO MANUFACTURERS, DEALERS, IMPORTERS,  
AGENTS AND USERS OF

## Gasoline Automobiles

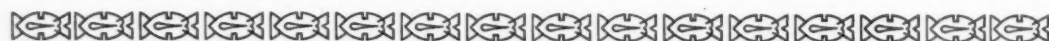


United States Letters Patent No. **549,160**, granted to George B. Selden, November 5, 1895, controls broadly all gasoline automobiles which are accepted as commercially practical. Licenses under this patent have been secured from the owners by the following named manufacturers and importers:

Electric Vehicle Co.	Pope Motor Car Co.
The Winton Motor Carriage Co.	The J. Stevens Arms & Tool Co.
Packard Motor Car Co.	H. H. Franklin Mfg. Co.
Olds Motor Works	Charron, Girardot & Voigt Co. of
Knox Automobile Co.	America (Smith & Mabley)
The Haynes-Apperson Co.	The Commercial Motor Co.
The Autocar Co.	Berg Automobile Co.
The George N. Pierce Co.	Cadillac Automobile Co.
Apperson Bros. Automobile Co.	Northern Mfg. Co.
Searchmont Automobile Co.	Pope-Robinson Co.
Locomobile Co. of America	The Kirk Mfg. Co.
The Peerless Motor Car Co.	Elmore Mfg. Co.
U. S. Long Distance Automobile Co.	E. R. Thomas Motor Co.
Waltham Manufacturing Co.	Buffalo Gasoline Motor Co.

These manufacturers are pioneers in this industry and have commercialized the gasoline vehicle by many years of development and at great cost. They are the owners of upwards of four hundred United States Patents, covering many of the most important improvements and details of manufacture. Both the basic Selden patent and all other patents owned as aforesaid will be enforced against all infringers.

No other manufacturers or importers are authorized to make or sell gasoline automobiles, and any person making, selling or using such machines made or sold by any unlicensed manufacturers or importers will be liable to prosecution for infringement.

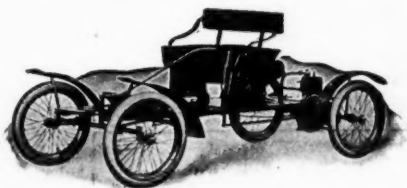


Association of Licensed Automobile Mfrs.

No. 7 EAST 42d STREET, NEW YORK.



# PRICE, \$375



Patented March 10, 1903.

Any infringement of the above claims will be subject to immediate prosecution.

## IT BEATS THEM ALL

# The Orient Buckboard

*The Lowest Priced Automobile  
in the World*

Why invest in a costly car which may be a back number next season,  
when the little buckboard will do all your work and  
can beat them all in speed?

### WHAT SOME OF THOSE SAY WHO RIDE THEM.

WALTHAM MFG. CO., Waltham, Mass.

Gentlemen.—I arrived home with my Orient Buckboard O. K.; only made one stop and that was to oil it. Never had such a fine ride in my life. I have run it about 200 miles without any trouble. I had expected to have trouble in starting it but as yet it has never refused.

Wishing you every success, I am

Yours truly,

F. W. BENT.

West Quincy, Mass., July 1, 1903.

WALTHAM MFG. CO., Waltham, Mass.

Dear Sirs.—About three months ago I purchased one of your Buckboards in Newark, N. J., and have used it almost continually since in my profession, and for pleasure. I have added a few little improvements that have made the machine as perfect as I would expect of an automobile that costs considerably more. I have not had any trouble with overheating or any of the other troubles so common with the general run of large automobiles. Would be pleased to recommend your Buckboard to any inquiring purchasers.

Sincerely yours,

DR. C. W. TITUS.

Newark, N. J., July 11, 1903.

WRITE FOR ILLUSTRATED CATALOGUE.

## WALTHAM MFG. CO., Waltham, Mass.

# GOODRICH

## CLINCHER AUTOMOBILE TIRES



help to achieve results that count for the success of the whole  
automobile industry. ∴ Their record is a history of many  
triumphs accomplished by American machines. ■ ■ ■

THE ORIGINAL AMERICAN CLINCHER

# Locomobile

STEAM CARS

FOR STEADY USE  
DAY IN, DAY OUT

Never any worry  
about hills

"Runs like a little  
sewing machine"

**\$650** and  
upwards



No whirring noise or  
thumping vibration

The delicate control  
makes driving very  
enjoyable

**STRONGLY BUILT**

Many Improvements  
and conveniences

**MANY STYLES**

The *Locomobile* Company of America, Bridgeport, Conn.

MEMBERS OF THE ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS.

BOSTON: 15 Berkeley St.

BRIDGEPORT: Factory at Seaside Park.

NEW YORK: Broadway, corner of 76th St.

PHILADELPHIA: 249 N. Broad St.

CHICAGO: 1354 Michigan Ave.

LONDON: 39 Sussex Pl., South Kensington.

## SECOND HAND AUTOMOBILES Usually Sell Low

### The Waterless Knox Doesn't

#### SAMPLE INSTANCES:

Mr. B—— bought a Knox runabout in 1902 for \$1,000, used it a year and sold it for the same price. No repairing was done on it meanwhile.

Mr. F—— bought a Knox runabout in 1902 for \$1,000, used it hard for a year in his business and sold it for \$900. The total repair bills during the year amounted to 67 cents.

Full names and particulars will be furnished to anyone interested.

**FOR SIMPLICITY, RELIABILITY AND CONVENIENCE, THE  
KNOX CARS ARE INCOMPARABLE**

*Can make Immediate Deliveries.*

## Knox Automobile Co., Springfield, Mass., U.S.A.

MEMBERS OF ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS

#### PRINCIPAL AGENCIES:

New York, H. M. Davis, Mgr., 146 W. 39th St.  
Boston, Reed-Underhill Co., 41 Stanhope St.  
San Francisco, National Automobile & Mfrs. Co., 134-148 Golden Gate Ave.  
Philadelphia, Banker Bros. Co., 629 N. Broad St.  
Pittsburgh, Banker Bros. Co., Baum & Beatty Sts.  
Chicago, A. C. Banker, 456 Wabash Ave.  
Minneapolis, Northwestern Motor Vehicle Co., 112 So. 6th St.  
Fall River, Mass., J. Edward Newton.  
Providence, R. I., Davis Automobile Co., 79-83 Mathewson St.  
Grand Rapids, Mich., Adams & Hart.

Hartford, Conn., Brown, Thomson & Co.  
Brockton, Mass., W. H. Marble, 152 High St.  
Paterson, N. J., F. W. Stockbridge, 450 Broadway.  
Marlboro, Mass., A. M. Page.  
St. Louis, Mississippi Valley Auto Co., 3935 Olive St.  
Worcester, Mass., Worcester Automobile Co., 84 Exchange St.  
Denver, Geo. E. Hannan, 1455 California St.  
Milwaukee, Wis., Geo. A. Crane, 187 Wisconsin St.  
Kansas City, Hogan-Irvin Co., 1221 McGee St.  
Louisville, Sutcliffe & Co., 1051 Third St.

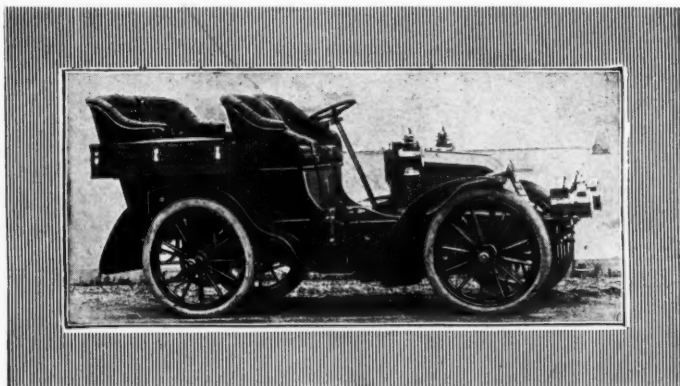




# Locomobile



9 horse power and 16 horse power Gasoline Touring Cars. Order now so as to secure your car for the fall tours to Boston and Pittsburg ■ ■ ■



A 4-CYLINDER LOCOMOBILE TONNEAU DE LUXE.

Front Vertical Motor type used exclusively.

All styles of bodies in wood and aluminum ready for quick finish.

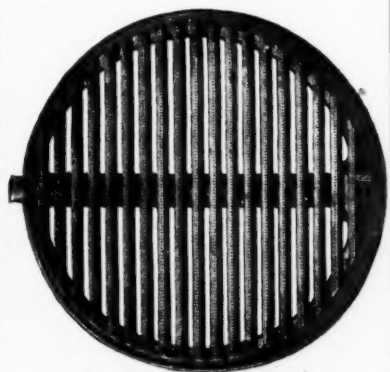
## The Locomobile Company of America, Bridgeport, Conn.

MEMBERS OF THE ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS.

BOSTON: 15 Berkeley St.  
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NEW YORK: Broadway, corner of 76th St.

PHILADELPHIA: 249 N. Broad St.  
CHICAGO: 1354 Michigan Ave.  
LONDON: 39 Sussex Pl., South Kensington.

## "BARTON" STEAM GENERATORS, Water Regulators, Throttle Valves. "Burnell" Kerosene and Gasoline Burners and Generators



Cut shows "Burnell" Burner. Patented May 5, '03.

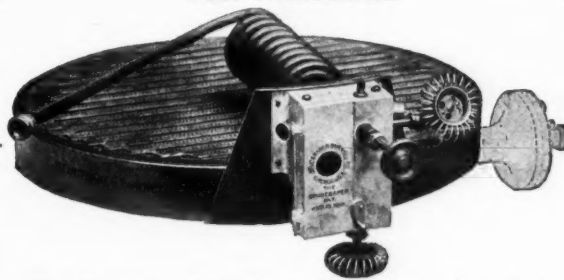
Change your method of making steam and have an up-to-date car. Steam generator, kerosene burner is the most ideal plant for auto, or launch. Made in all sizes from 14-inch to 30-inch. No burning of boiler, no water glass, no hand regulation, no danger from fire, and more dry steam than you can use. Two hundred miles with 5 gallons kerosene. Positively no clogging of generator

### Guaranteed Satisfaction

or money back. The Burnell Gasoline Burner and Generator sold separately—formerly Studebaker-Burnell goods. ∴ Manufacturers of up-to-date appliances for steam cars. Write for catalogue and descriptive matter at once.

Greatly improved over last year's goods, known as Studebaker-Burnell goods.

### FOR KEROSENE



Both Kerosene and Gasoline Generators have valve to seat.



Cut shows Steam Generator. Made in all Sizes.

## "BURNELL"

Generators and Burners sold separately

From Neiheisel Bros., Boulder, Colo., under date of July 21st, 1903. "The more we run the boiler in our carriage the better it works. We would not change back to the fire tube boiler for any price."

The BARTON BOILER COMPANY, SOLE MANUFACTURERS,

OFFICE AND FACTORY

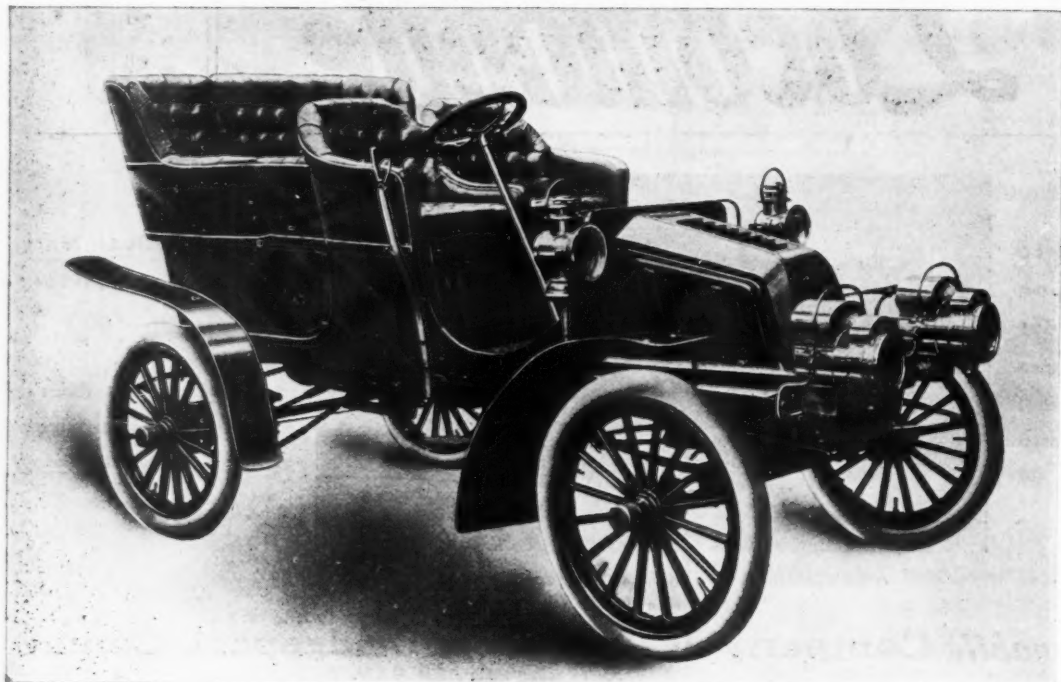
4212-4230 State St., Chicago, U. S. A.

PHONES OAKLAND 1540-1.

FOR DAILY  
USE.....

# Fredonia Model No. 2

SIMPLICITY  
STRENGTH  
RELIABILITY



PRICE, \$1,250.00

## FREDONIA TONNEAU No. 2.

### DESCRIPTION.

Four passenger, weight 1,500 pounds, 10 horse power motor, normal motor speed 600 revolutions, one cylinder, 6-inch bore by 6 1/2-inch stroke, jump spark, dry batteries, speed ratio between motor and wheels on fast speed three to one, wheel base 87 inches, track 56 inches, wheel diameter 30 inches, wheels wood, tires 3-inch Clincher, live rear axle, roller hub bearings, two brakes, hub brake on rear wheels, planetary gear transmission, speed 6 to 25 miles an hour, chain drive to axle, wheel steering, gasoline tank capacity 9 gallons, water 3 gallons, water circulation by pump and radiating coil, lubrication by gravity feed, radius on one charge 150 miles.

9 H. P.  
RUNABOUT  
\$1,000

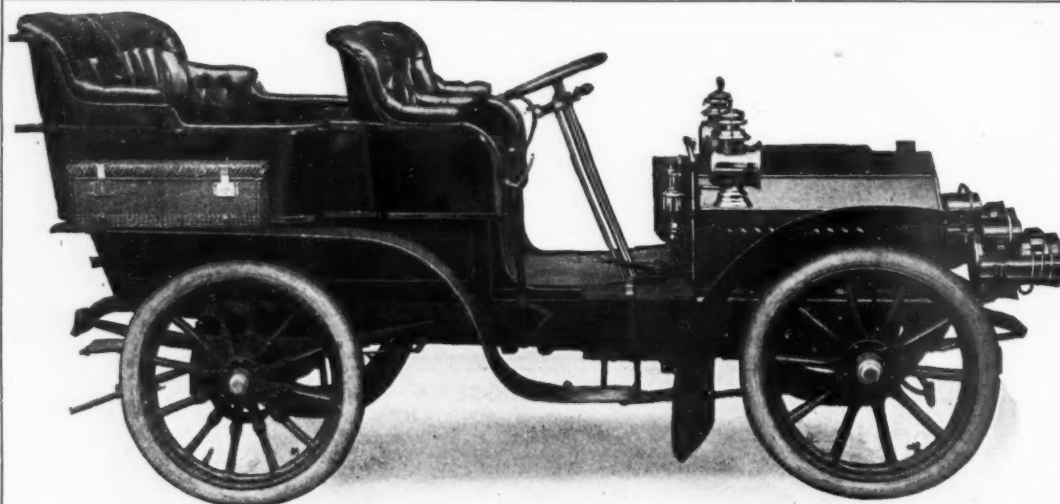
Winner of the President's  
Cup in the New York-Boston  
Reliability Test.

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Chicago Agent: Edmond F. Dodge, of P. G. Dodge & Co., 2116 Lumber Street.  
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24 H. P. Four Cylinder Touring Car

SEE  
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LATEST  
IMPORTATION

Wonderfully  
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Starts from Seat  
Luxuriously  
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**AMERICAN DARRACQ AUTOMOBILE COMPANY**

F. A. La Roche Company, Sole American Importers and Distributors

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We have just received

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We have also received several of the latest Clements, with beautiful Clement-Rothschild and Labourdette bodies.

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 Chicago, Ill.: Oldsmobile Co., Githens Bros. Co.  
 Cleveland, Ohio: Oldsmobile Co.  
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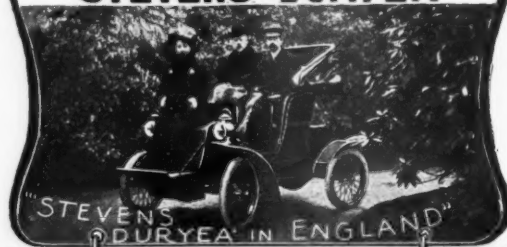
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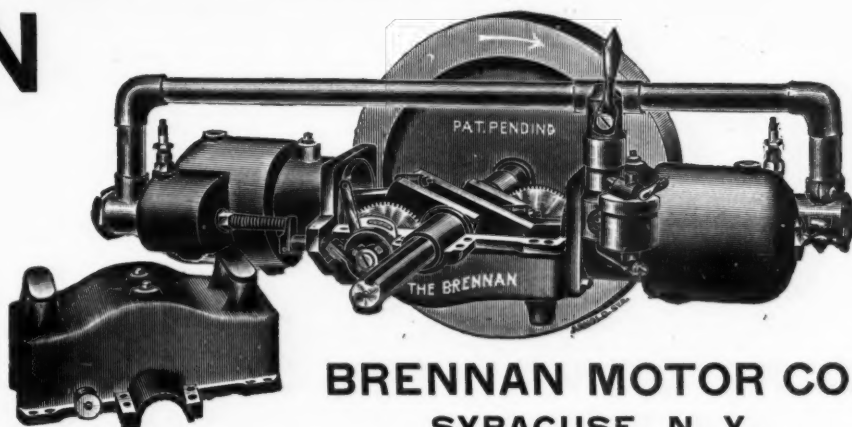
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# BRENNAN

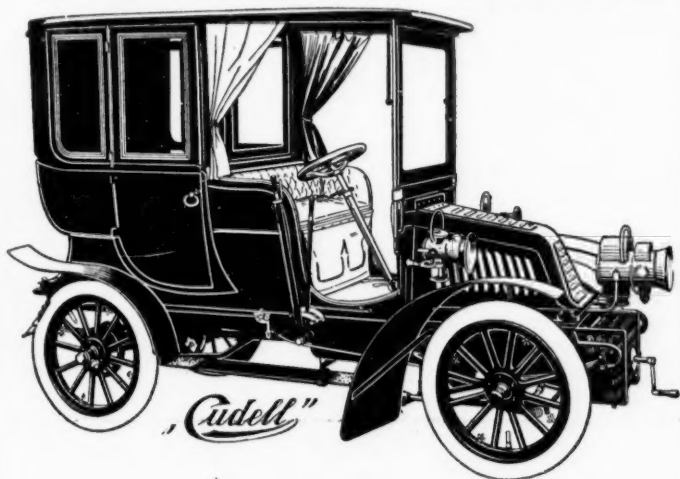
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2 cylinder 4 cylinder

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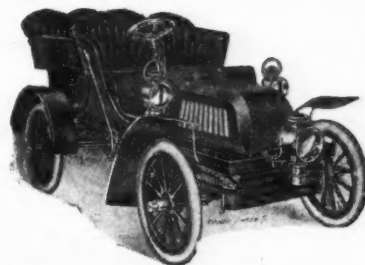
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"My trip from Terre Haute to Evansville was a very hard one, inasmuch as I was compelled to travel through seventeen miles of sand which varies in depth from one to one-and-a-half feet, and at frequent intervals the differential gear-box was dragging in the sand. I feel very proud over the accomplished feat of driving from Terre Haute to Evansville, as a \$3,000 machine failed to do this. A machine which started out with me from Terre Haute also went to the bad, and another was hauled in twenty-two miles by the real horse power. Of course, I have always felt that the Thomas was the only machine, and now I am more convinced than ever that the Thomas can accomplish things which would be utterly impossible for the heavy-weight so called high horse power cars of to-day."

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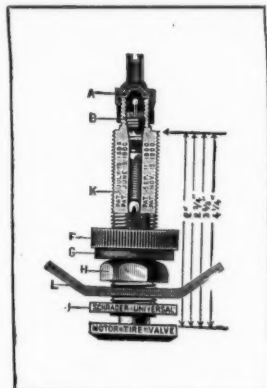
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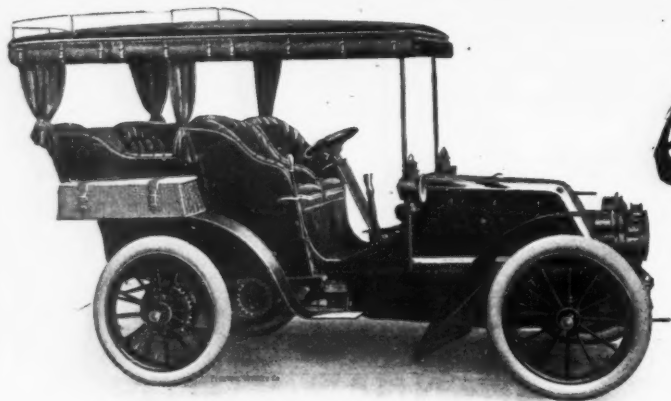
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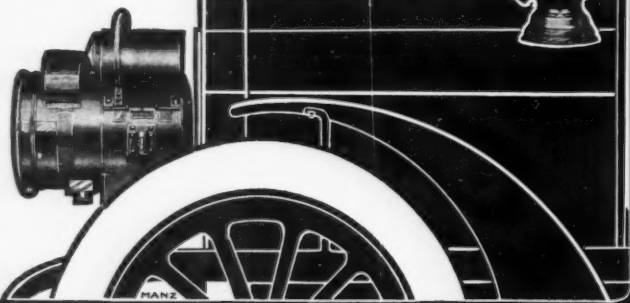
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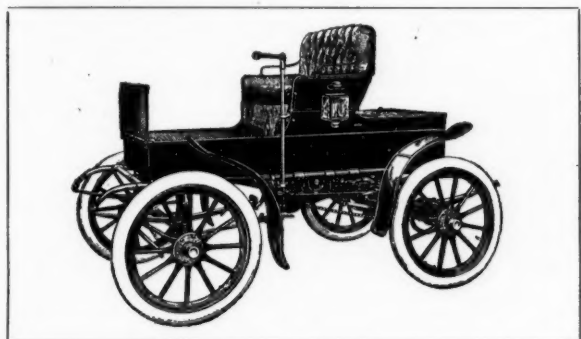
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Our goods are stylish and  
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We are equipped to make

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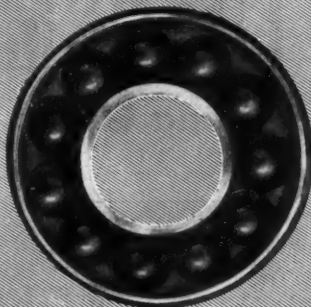
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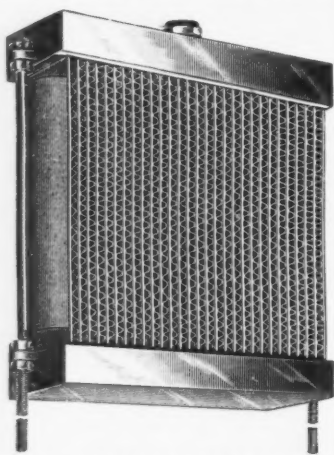
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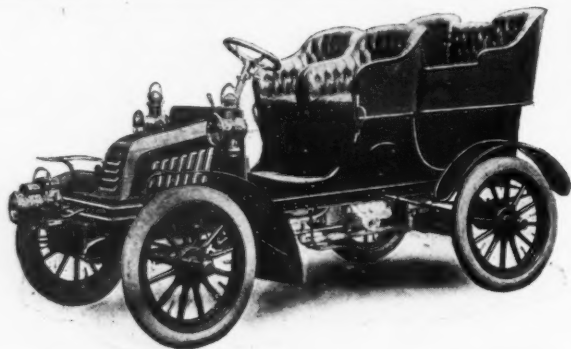
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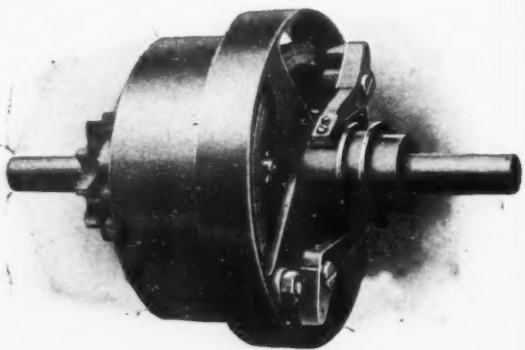
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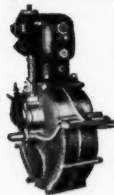


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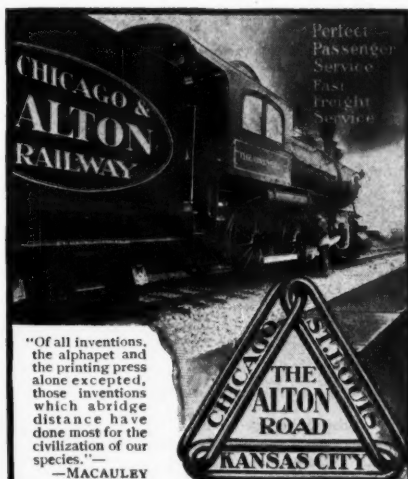


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Entire outfits for ignition wiring  
Send Measures.

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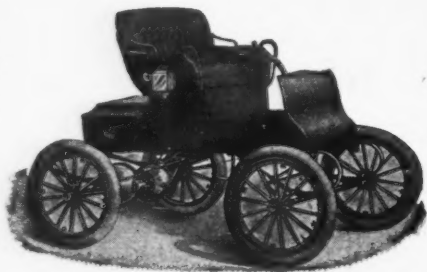
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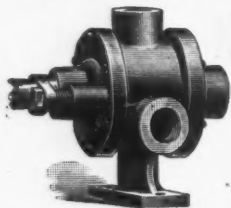
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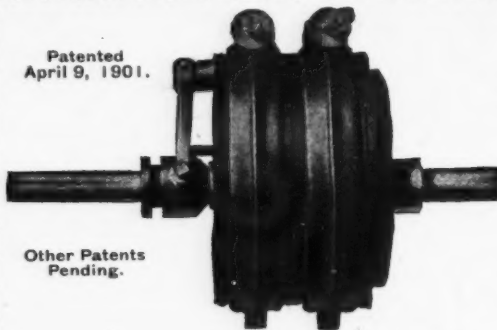
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Other Patents  
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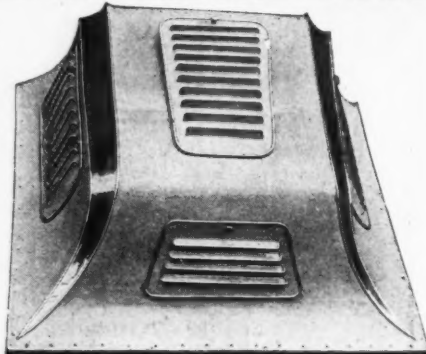
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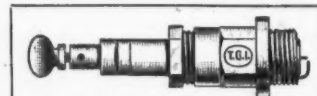
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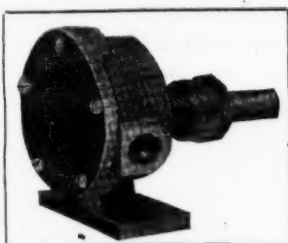
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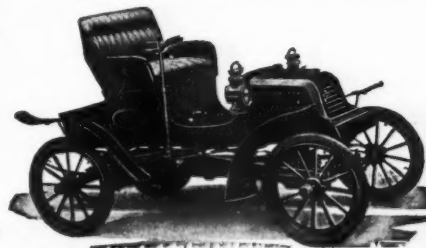
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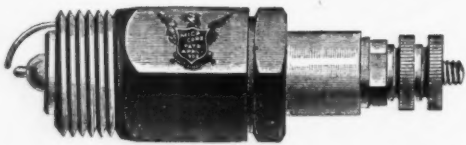
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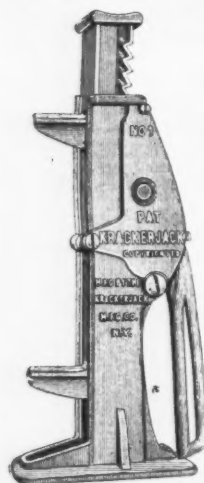
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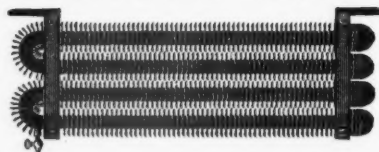
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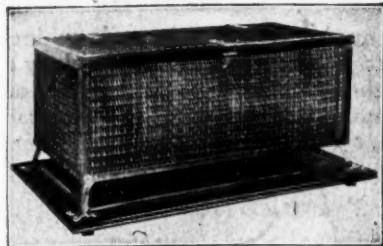
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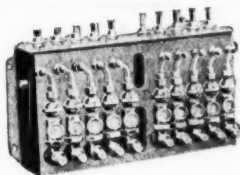
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# THE DUNLOP TIRES

**Stanley Steam Car** wins first award in Mass. Auto Club Hill Climbing Contest, Boston, April 20, with "Dunlops."

**Duryea Car** wins first award (in gasoline class) in same contest, with "Dunlops."

**Knox Delivery Car** wins first award in New York Commercial Contest May 20 and 21, with "Dunlops." (Weight of vehicle, 3,800 pounds.)

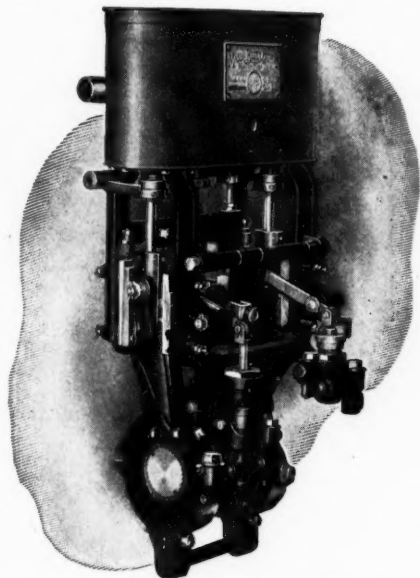
**Stanley Steam Car** wins world's mile record at Readville, Mass. May 30, with "Dunlops."

**C. H. Curtis Motor Cycle** wins first award in New York Motor Cycle Club's Hill Climbing Contest, May 30, with "Dunlops."

**B. B. Bird and R. R. Boorman** each win first awards in Motor Cycle Endurance Contest, New York to Worcester, July 3, 4, 5 and 6, with "Dunlops."

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